



Enabel



Sustainable Agriculture Kigoma Regional Project

SAKIRP

Annual Results Report 2021

Tanzania



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Acronyms

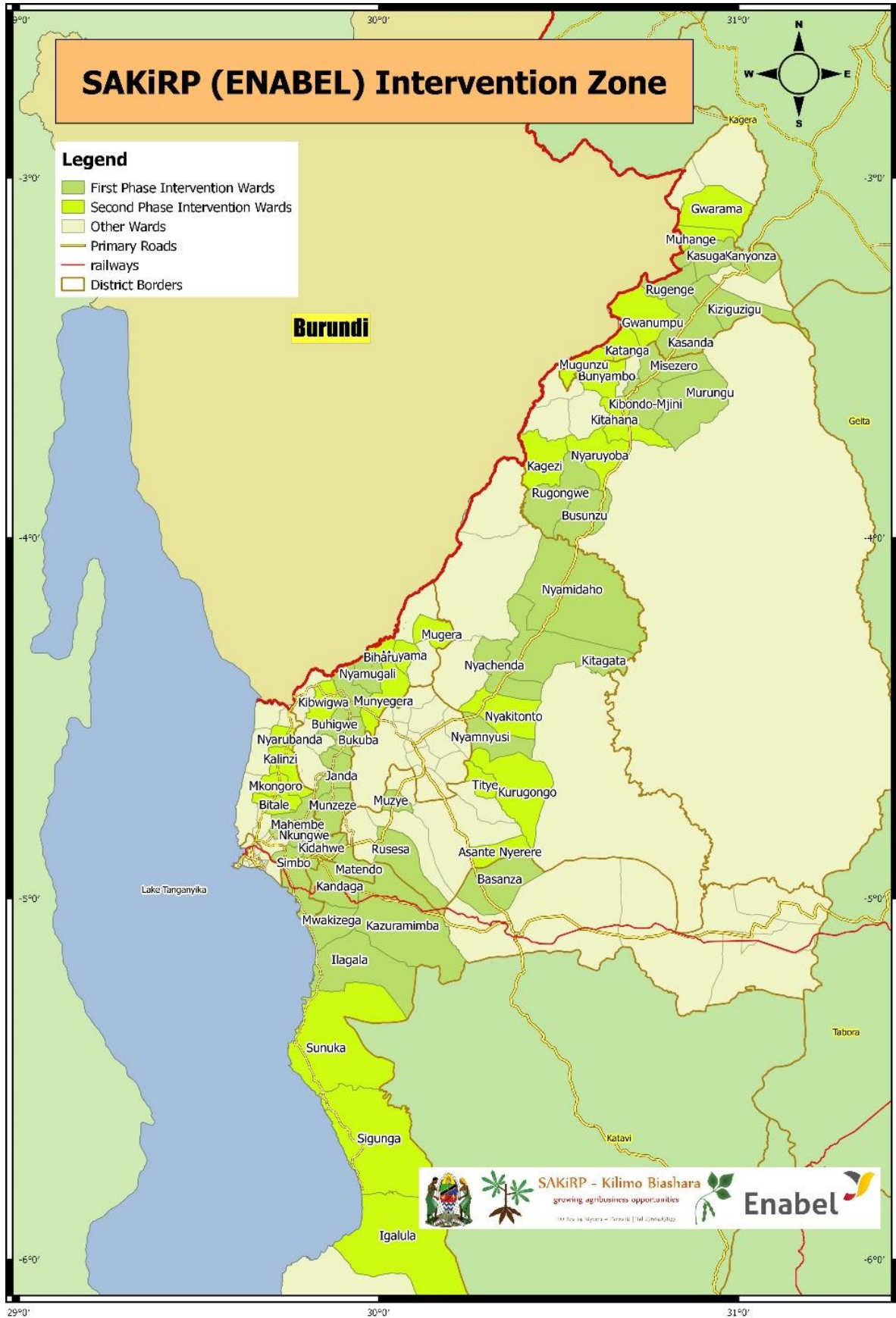
AAS	Assistant Administrative Secretary
AFM	Administration and Financial Manual
AFO	Administration and Financial Officer
AGRA	Association for Green Revolution in Africa
AIDS	Acquired Immunes Deficiency Development Syndrome
AMCOS	Agricultural Marketing Cooperative Society
ANO	Announcement of No Objection
ARDS	Agricultural Routine Data System Tanzania
ARI	Agricultural Research Institute
ASARECA	Association for Strengthening Agricultural Research in Eastern and Central Africa
ASDP	Agricultural Sector Development Programme
ASDS	Agricultural Sector Development Strategy
BIO	Belgian Investment Organisation
BDSP	Business Development Service providers
BFFS	Belgium Fund for Food Security
CB	Capacity Building
CBO	Community Based Organisation
CBODP	Capacity Building & Organizational Development Plan
CBSV	Cassava Brown Streak Virus
CBTNA	Capacity Building Training Need Assessment
CMO	Implementation Agreement
CMV	Cassava Mosaic Virus
CPI	Capacity Performance Index of farmer groups
CRS	Catholic Relief Services
CRDB	Cooperative Rural Development Bank
CSE	Commercial seed entrepreneur
CSO	Civil Society Organisation
DADP	District Agricultural Development Plan
DAICO	District Agriculture, Irrigation and Cooperative Officer
DAP	Diammonium Phosphate – fertilizer
DASIP	District Agricultural Sector Project
DED	District Executive Director
DFP	District Focal Person
DRC	Democratic Republic of Congo
EA	East Africa
ETR	End Term Review
FAAB	Farming as a business
FHHH	Female headed household
FEWSNET	Famine Early Warning Systems Network
FO	Farmers Organisation
FSP	Financial Service Provider
HH	Household
GAFCO	Good African Food Company
GAP	Good Agricultural Practices
GEWE	Gender Equality and Women Empowerment
GIS	Geographic Information System
GoTz	Government of Tanzania
IFAD	International Funds for Agriculture Development
IITA	International Institute for Tropical Agriculture
JGI	Jane Goodall Institute
JLPC	Joint Local Partner Committee
LF	Lead Farmer
LG	Local Government

LGA	Local Government Authority
LIC	Local investment climate
MATI	Ministry of Agriculture - Training Institute
MEDA	Mennonite Development Association
MFI	Micro finance institution
MIS	Market Information System
MIVARF	Market Infrastructure Value Addition and rural Finance Support Programme
MoCoU	Moshi Cooperative University
MoF	Ministry of Finance
MoU	Memorandum of Understanding
MTR	Mid Term Review
MVIWATA	Mtandao wa Vikundi vya Wakulima Tanzania
NMB	National Microfinance Bank
NRM	Natural Resources Management
NRM-LED	Natural Resources Management for Local Economic Development
NTA	National Technical Adviser
O&OD	Opportunities & Obstacles to Development
PASS	Private Agriculture Sector Support Trust
PIU	Project Implementation Unit
PO-RALG	President's Office – Regional Administration and Local Government
PPP	Public Private Partnership
PSC	Project Steering Committee
PSO	Private Sector Organisation
Pyxus	Sunflower processing firm located in Dodoma
QDS	Quality Declared Seed
QFP	Quality Food Products Ltd
RAS	Regional Administrative Secretary
RFT	Regional Facilitation Team
RR	Resident Representative
RS	Regional Secretariat
RSM	Regional Stakeholder Meeting
SA	Specific Agreement
SACCOS	Saving and Credit Cooperative Organisation
SAKIRP	Sustainable Agriculture Kigoma Regional Project
SIDO	Small Industries Development Organization
SPM	Structured production and marketing
SME	Small and medium enterprises
TADB	Tanzania Agricultural Development Bank
TARURA	Tanzanian Rural & Urban Road Agency
TBS	Tanzania Bureau of Standards
TCCIA	Tanzania Chamber of Commerce Industry and Agriculture
TFF	Technical and Financial File
TOC	Theory of Change
TOR	Terms of Reference
TOSCI	Tanzania Official Seed Certification Institute
VC	Value Chain
VCF	Value Chain Finance
VICOBA	Village Community Bank
WAEO	Ward Agricultural Extension Officer
WEO	Ward Executive Officer

1 Intervention at a glance

1.1 Intervention form

Intervention title	Sustainable Agriculture Kigoma Regional Project (SAKIRP)
Intervention code	TAN 14 031 01
Location	Kigoma Region Tanzania
Sector (CAD codes)	31120: Agricultural development
Total budget	€ 8.000.000 Belgium + 800.000 Tanzania
Partner Institution	MAFC, PO-RALG / Regional Secretariat Kigoma
Start date Specific Agreement	25th November 2015
Date intervention start	1 st June 2016
Planned end date of execution period	24/05/2021 + extension till 31/12/2022 approved
End date Specific Agreement	24/11/2021 + extension till 30/06/2023 approved
Target groups	Direct beneficiaries: smallholder farmers, especially women and other chain actors of cassava, sunflower & beans value chains. Secondary beneficiaries: local chain supporters private & public.
Impact	Local economic development and wellbeing of smallholders is improved in Kigoma Region through sustainable agriculture development
Outcome	Smallholders' income is increased and diversified in Kigoma region, especially for women, through pro-poor value chains development.
Outputs	R1: Value chains management and coordination mechanisms are installed and steer cassava and beans value chain development.
	R2: Sound financial mechanisms are developed, and financial organisations are strengthened to support value chains development.
	R3: Public and private chain supporters provide effective services to value chains actors.
	R4: Stronger position of small holders, especially women, in the value chain through improved integration and empowerment.
	R5: Improved market access and sustainable trade
Period covered by the report	January - December 2021



1.2 Self-assessment performance

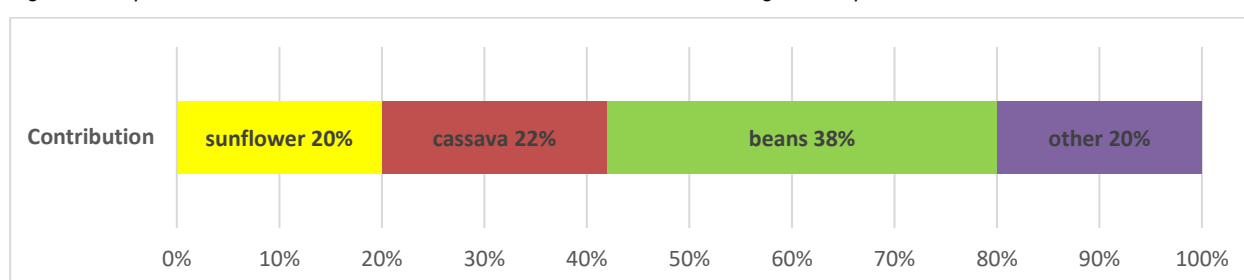
1.2.1 Relevance

	Performance ¹ Self-assessment	Performance Midterm review
Relevance	B	B

The SAKIRP project remains highly relevant to the Tanzanian smallholder context. The project's relevance is underpinned by the following:

- The value chain approach is taking root beyond the initial value chains of beans and cassava. The introduction of sunflower and soybeans has compensated for the declining role that cassava originally played in the household income basket. The institutionalisation of smallholder organisation through AMCOS represents a solid foundation upon which several smallholder transformation and commercialisation initiatives can build. As indicated in the chart below, crops promoted by the project constitute a considerable share of total household income, up to 80% of household income from crops in 2021.

Figure 1: Crop contribution to household income in 2021 in households cultivating all 3 crops



Source HH survey 2021

- SAKIRP remains an integral part of the Government of Tanzania's ASDP II and is considered one of the agricultural flagship projects at Kigoma regional level. With its anchorage within the regional secretariat, SAKIRP is a benchmark against which additional agricultural support projects are developed and integrated within the regional strategy.
- The support that SAKIRP is providing to local government authorities to strengthen local agricultural extension system serves to attract other players (not-for-profit and private) to implement complementary interventions that contribute to the economic upliftment of farmers in general.
- The SAKIRP project has forged linkages with the UN agencies to ensure that the Kigoma agricultural economy has clear articulations to the refugee economy. The facilitation of this linkage increases the relevance of SAKIRP as it continues to build basic capacities required for smallholder farmers to supply goods to highly formal markets as the one represented by WFP.
- The project's strategy of mobilising and building the capacity of mixed crop AMCOS directly aligns with the government strategy of encouraging cooperatives as an avenue of integrating smallholder farmers within formal agricultural markets.
- The SAKIRP strategy of easing financial access for farmers through linkages with banks directly addresses a long-standing challenge of limited access to value chain finance. Credit co-guaranteeing mechanisms installed via the PASS Trust partnership has encouraged banks to lend to smallholder cooperatives

Regarding the development of rural roads, the stone arch bridge construction has gained currency at regional and national levels. The SAKIRP Kigoma experience is used to mainstream the stone arch bridge technology into the TARURA national plan and budget.

¹ The self-assessment figure is an average score of the technical staffs (steering committee members, some extensions workers, DFPs, technical advisers & PIU). It is not necessary the score of the signatories of the summary.

There were new developments in 2021 that further increased the relevance of SAKIRP:

- In response to private sector demand, the project introduced a production pilot of soybeans under a contract farming arrangement between Silverlands Tanzania and selected AMCOS. The addition of soybeans aligns with the original strategy of expanding project support to related value chains that can benefit from the groundwork already done in the context of cassava and bean value chains.
- SAKIRP scaled up sunflower farming in Kigoma which fully aligns with the Tanzanian government policy of import substitution of edible oil and creating opportunities for local processing and value addition.

Feedback from project partners and the midterm review indicate that the overall intervention logic remains valid. However, some fundamental assumptions made during the formulation have not held true:

- In Kigoma region, value chains are dominated by the informal sector with limited scope for growth and capacity to transform smallholder agriculture. In cassava trade, there are no lead firms. In the bean value chain, some interested formal firms withdrew because of narrow margins and a difficult business operating environment. Both beans and cassava have limited opportunities for value addition in Kigoma region.
- Contrary to the optimistic market dynamics during the formulation, conditions for the cassava value chain have deteriorated and stabilised at a low equilibrium.
- The assumption of free trade in East Africa is challenged by the developments on the ground. Border closures and non-tariff barriers between EAC members states are frequent.
- For equity reasons, development projects emphasise the empowerment of smallholder farmer groups to engage in collective marketing. However, the socio-economic dynamics on the ground favour the model of individual producer marketing through agents funded by individual traders. The latter system seems to cope better with the existing financial constraints, trading risks and management related risks of farmers' organisations. The medium-term viability of smallholder collective marketing system hinges on continued capacity building, governance oversight and leadership with integrity.

1.1.1 Efficiency

	Performance Self-assessment	Performance Midterm review
Efficiency	B	C

Factors that contributed to efficiency:

1. The SAKIRP project's service delivery model which deploys local government extension staff has been helpful in harnessing local expertise at a cost that is far more reasonable than relying on NGOs that employ staff who depart when the project ends. The same approach has also been applied in the capacity development of AMCOS where the regional and district cooperatives play a central role, and the use of costly consultancies is kept to a minimum level.
2. In 2021, the project partnered with Pyxus Tanzania who provided private extension staff to support the production of sunflower; that model was later dropped because of extensive side-selling which made it difficult for the company to recoup investment made in supporting complementary extension services.
3. At the beginning, the project worked with a large number of smallholder producer groups that consisted of between 10 and 30 members; This was caused by the absence of umbrella farmer organisations with a larger membership. This approach helped the project to widen its reach. The shift of focus to working with AMCOS has led to more consolidation which generates efficiencies in both agronomic / marketing extension and access to credits.
4. The Enabel direct management has proven efficient. The cost efficiency of project activities is good and aligned with market prices. Its focus is on grassroots investments and capacity building.
5. The SAKIRP team has proven flexible and undertaken many judicious adjustments such as reorienting the project towards production, collaboration with the LG extension system, reorienting the investment innovation fund towards public infrastructure and the support to AMCOS.

6. The stone arch bridge technology has been extremely cost efficient. With a limited construction budget of <1 million euro, SAKIRP will build more than 70 bridges and make a substantial contribution to the road network in Kigoma region.
7. The mobile data management allows for more efficient data collection, two-way communication & learning resulting in better performance monitoring of extension staff.

Factors that impacted on efficiency:

1. The application of local contribution principle across the board has not just resulted in the leveraging of local resources but has also fostered a sense of ownership amongst beneficiaries. The mobilisation of local contribution has, however, been time-consuming and, in some cases, led to implementation delays.
2. Despite the best efforts to speed up processes, it has not been possible to align public tendering and tedious credit requirements of parastatal organisations to the production and marketing dynamics of smallholder farmers on the ground. This often-delayed the supply of inputs or made credit unavailable at the critical moments when most needed.
3. The focus on smallholder farmers is socially just and is the direct mandate of SAKIRP. However, the smallholder approach requires a lot of capacity building, patience and dealing with inefficiencies. SAKIRP has not been in the position to directly support the private sector. Medium-scale commercial farmers and processors with the capacity to co-fund investments and create economies of scale fall outside the project target group.
4. For equity reasons, some districts insisted on the expansion to remote wards or wards without competent agricultural extension workers. Additional assistance is required in such wards but the efficiency of supervision is low due to long distances and inadequate staffing.

1.1.3 Effectiveness

	Performance Self-assessment	Performance assessment Midterm review
Effectiveness	A	B

Result	Achievements
<ul style="list-style-type: none"> • Value chain coordination 	<ul style="list-style-type: none"> • The project's deployment of Kobo data collection system significantly improved extension service monitoring and quality of agricultural data collection to the extent that the Ministry of Agriculture is considering adopting a similar system at national level • Effective value chain stakeholder engagements have resulted in the introduction of new crops such as sunflower and soybeans • Collaboration with UN agencies, especially WFP, has provided a practical example of the development-humanitarian nexus where opportunities in the humanitarian aid sphere are harnessed to boost economic activity
<ul style="list-style-type: none"> • Value chain financing 	<ul style="list-style-type: none"> • The adoption of hybrid value chain financing mechanisms undergirds the success that the project has registered in linking farmers to markets and promoting collective marketing of both beans and sunflower. The agricultural input revolving fund has been instrumental in guaranteeing minimum production volumes and providing a platform for financial institutions to provide the relatively low risk aggregation financing. • Through co-guaranteeing arrangements with PASS Trust, the project has led the way in mitigating risk associated with lending to smallholder farmers. A total of 12 AMCOS have been successfully linked with the Tanzania Agriculture Development Bank (TADB) to access both input and working capital loans. • The project successfully facilitated farmers' access to a modest but symbolically important contract-linked input financing for the soybean production pilot. Results from this pilot can be pivoted to encourage more agribusiness firms to follow suit. • The business innovation fund was transformed into a "access to markets" infrastructure fund. 48 bridges have been built and 21 are under construction. With the project extension, more than 80 bridges will be constructed as the fund is very popular with local governments. Data from case studies show a reduction of 50% in transport costs from field to market.

<ul style="list-style-type: none"> Value chain support services 	<ul style="list-style-type: none"> SAKIRP has rendered LG extension more operational in Kigoma Region through facilitation, training, and performance assessments. In 2021, farmers report a satisfaction rate of 77% for the local government extension services supported by SAKIRP. This is in comparison to 50% registered during the first annual household survey. The project engaged, trained and deployed 11 local-based agribusiness facilitators (known as Farming as a Business Coaches) who provide on-the-job coaching and mentoring to agricultural marketing cooperatives. Farmers' satisfaction with the services provided by these local consultants stands at 90% in 2021 up from 83% in 2020. when the project first started measuring this metric in 2020. Agricultural Marketing Cooperative Societies (AMCOS) have been linked with agricultural input supplies for the provision of support services related to inputs provided (Yara, Bytrade)
<ul style="list-style-type: none"> Strengthening production & producer groups 	<ul style="list-style-type: none"> Based on the Capacity Performance Index (CPI), the capacity of the groups has improved from 11% in 2019 to 23% in 2020 to 40% in 2021 being in the highest cat III category. These cat III groups have moved beyond the stage of being merely an association expecting government and donor subsidies. Through hands-on aggregation and production, 17 AMCOS have grown in their management ability and coordination of collective actions. Adoption of good agricultural production techniques make a direct impact on poverty reduction and provided the minimum bulk for structured trading. Nevertheless, there is still a lot of scope to improve the production of smallholder farmers. To deal with the cassava mosaic and brown streak virus outbreak, the production of double tolerant cassava varieties was increased to 4.9 million cuttings through the concept of commercial seed entrepreneurs. Beneficiary farmers report a satisfaction rate of 82% with the peer extension support provided by the lead farmers supported by SAKIRP, up from a baseline value of 74%. Demonstration that farmers can meet stringent quality standards if provided strict post-harvest management and price incentives.
<ul style="list-style-type: none"> Markets and trade 	<ul style="list-style-type: none"> The project consolidated its relationship and grew traded volumes by over 300% of the previous year. Beans sold reached 1300 metric tons. This was due to WFP's decision to purchase yellow beans which constitute the bulk of beans produced in Kigoma region. An additional 6 AMCOS were registered as WFP food commodity vendors thereby bring the tally of registered vendors to 9. The WFP vendor registration milestone opens marketing opportunities for maize and other agricultural commodities that WFP buys for its humanitarian food aid One AMCOS managed to export 47 tons of red kidney through the intermediation of Silverlands Tanzania. While the volume is small, the transaction is testimony to the upgrading level that smallholder farmers have achieved in terms of compliance with end market requirements. 1458 smallholder farmers (in 17 AMCOS) were linked to Pyxus in contract marketing relationships for unprocessed sunflower grain. The volume of sunflower traded under this relationship was 304 tons (value at TZS 243 million) Despite the low volumes registered in the 2020/2021 season, Pyxus is still interested in buying sunflower from smallholder farmers, albeit without much upfront support in production and post-harvest management The growing number and capacity of AMCOS is part of the broad-based strategy for bringing farmers closer to the market and strengthening their negotiating power In 2021, 5 AMCOS and 3 SMEs received aggregation financing from TADB and NMB respectively; this boosted liquidity and ensured that farmers were timely paid for their produce
<ul style="list-style-type: none"> Improvement on farmers' income 	<ul style="list-style-type: none"> In 2021, the income of the overall beneficiaries increased by 24% relative to baseline. However, the income of AMCOS members that participated in structured bean production & marketing increased by 47% from baseline and is 122% above non-beneficiaries household income. The income of AMCOS farmers' households that also cultivated sunflower additional to beans increased by 37% when measured against AMCOS farmers' households cultivating beans alone. Scaling up sunflower production from an estimated 135 tons in 2020 to 1200 tons made an impact on farmers income and local processing. A pilot of soya

	<p>production/marketing in collaboration with Silverlands is ongoing.</p> <ul style="list-style-type: none"> The increase in income for women farmers lags behind their male counterparts. The average income generated by women from structured bean marketing arrangements was 52% below the income of male farmers. For sunflower this stood at 50% less income for women as compared to men.
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1.2.2 Potential sustainability

	Performance Self-assessment	Performance assessment Midterm review
Potential sustainability	B	B

SAKIRP will enter its consolidation and exit phase in 2021-22 during which the sustainability of the innovations and achievements is the major target.

Economic sustainability

Sustainable market access is critical to the economic viability of value chain innovations introduced by the project.

Diversification of buyers to focus more on private agribusiness firms

Market access implies linkages to reliable and diverse buyers. WFP is a transitory buyer, and, for beans, the project is working on building longer term relationships with private commodity buyers such as Musoma Foods, Silverlands and Apec. The contract farming arrangement signed by Silverlands for soybeans is part of the drive to diversify both markets and commodities to enhance the economic sustainability of all value chain development efforts.

Capacity strengthening for AMCOS Agricultural Marketing Societies

Effective, self-sustaining, and well-managed AMCOS are required to take over most of the coordination responsibilities currently assumed by the project. The following actions are in progress:

- AMCOS members are being mobilised to build their own capital base by paying up joining fees, share capital and annual membership fees. Calling in all member-generated resources will enable AMCOS to meet recurring overheads and provide cushion for productive capital allotments such as the in-kind loan fund
- Install and update financial management systems that enhance transparency and help in preventing fraudulent activities
- Draw lessons from financial linkages conducted to date and guide AMCOS leaders to assume responsibility for all the key process
- The project is documenting all credit performance information related to the revolving in-kind loans to have a structured roster on the credit performance of individual farmers.

Cassava

As a food crop, cassava has traditionally functioned as a reserve crop whose importance swings in relation to the overall food availability situation. The sustained decline in the demand for cassava has prompted farmers to re-adjust their production plans with a reduced allocation. The readjustment seems to have led to more productivity as less efficient farmers dropped out. Consequently, households that still grow cassava report relatively more income from the crop than was the case in the past. To boost productivity and resilience in the value chain, the project has introduced new disease tolerant varieties such as TZ130. Phytosanitary clean zones have been introduced to ensure that diseases are contained, and clean planting materials are widely available. On the market access front, the growing AMCOS aggregation capacities are expected to spill over to the buying and selling of dried cassava without relying on market intermediaries.

Beans

Despite the perennially low yields, beans will remain an important cash crop for smallholder farmers. The opportunity for farmers to sell to WFP has resulted in prices that are roughly 30% above the open market price. The actual profitability is, however, mitigated by more exacting quality requirements which result in high levels of post-harvest losses as defective beans are excluded during the sorting process. The introduction of collective marketing backed by aggregation pre-financing is expected to help improve profit margins as farmers can better time their sales to coincide with seasonal price peaks. Furthermore, the adoption of better performing varieties such as Calima Uyole and red kidney beans will also boost yields and contribute to better gross margins. Meeting the high WFP procurement and logistical standards by AMCOS will be a challenge without external assistance.

Sunflower

Sunflower exceeds performance expectations from an economic standpoint. It has emerged as the fastest growing contributor to smallholder beneficiary household income (in households cultivating sunflower). The boom in edible oil demand led to high competition among buyers resulting in higher prices which translated into increased benefits for farmers. The boom in Kigoma was spurred by local processing and domestic consumption. The input supply system has responded to the general demand making it easier for farmers to purchase improved seeds locally. The high demand for locally processed sunflower oil and the government policy of import substitution implies that, in the medium term, sunflower will continue to be an economically viable crop. It is expected that the production will triple in 2022/23. Growing levels of industrial processing capacity by companies such as Pyxus and Mount Meru point to a positive economic outlook for the crop. These large companies will also absorb the excess production in Kigoma once the local processing reaches a saturation point.

Soya

The soya pilot has been developed on commercial terms with Silverlands. The indications are that soya has a better economic return than beans because of its disease resistance and is adapted to the agro-ecological conditions of Kigoma region. Provide prices remain high, the outlook for sustainability is good with various alternative markets (poultry feed and baby food industries) in the subregion. The use of open pollinated soya varieties contributes to sustainability.

Stone arch bridges for access to markets

The decision of the TARURA board to mainstream the stone arch technology is the cornerstone for its continuation in Tanzania. TARURA has assigned a special unit with the promotion of the technology. Stone arch bridges have proven to be sustainable over the decades because of its reliance on local resources, strong cost saving and structural strength. The creation of a pool of experienced and integer masons is the biggest factor to sustain the technology. The existing detailed Kiswahili manual will continue to provide skill development of masons and technical personnel.

Agro-input supply

With the increased commercialisation of smallholder agriculture, the market for agro-inputs grows in Kigoma region and provides for economies of scale. Bulking seed and fertilizer supplies is a main function of AMCOS that has been supported by SAKIRP. This role can however only be fulfilled if input credit is available. The sustainability of the sunflower hybrid seed supply is guaranteed by the strong involvement of the private sector. Without donor support, commercial cassava cuttings units have been struggling with profitability everywhere in Tanzania. The sustainability of the bean seed sector should not focus on commercialisation but on on-farm seed selection, increased phytosanitary measures and seed dressing.

Agricultural extension

SAKIRP trained extension workers and provided them with motorcycles and smartphones, will be used beyond the project lifespan if they are well-maintained. However, it is not guaranteed that running costs will be covered by the district councils or whether the same level of oversight of workplans and implementation will be ensured. The central government guidelines state that 20% of the crop cess should be invested in agricultural extension. But the local revenue of most rural local governments is inadequate.

Value chain financing

Value chain financing sustainability rests on AMCOS' ability to manage and grow available resources (including revolving loan fund) as well as continued access to seasonal credit for input supply and aggregation. The co-guarantee facility implemented by the project has established relationships with banks and such relations are set to continue. The continuation of such relations is intricately linked to the sustainability of market linkages established and the AMCOS ability to attract new buyers. The regional cooperative office's overall oversight on the input revolving funds will deter financial malpractices and enhance the fund sustainability. One of the critical oversight roles, involves early detection of leadership challenges and acting to ensure that best practices are followed in the day-to-day management of AMCOS resources. The recent post-covid price hikes of fertilizer and seeds are eroding the capacity of the input revolving funds to serve a larger number of farmers.

Ownership

SAKIRP has relied as much as possible on local actors instead of consultancy agreements. SAKIRP involved regional and local government authorities as well as technical services and other VC stakeholders within its activities, actively working towards building their capacity. As a result, regional and district authorities, extension services, TCCIA and SIDO should be in a better position to continue supporting cassava, sunflower and bean value chain development beyond the project timeframe. A good indicator of ownership is that TADB shifted its western zonal office to Kigoma because of the credit portfolio opportunities created by mixed AMCOS supported by SAKIRP. TARURA has taken the lead for the national scaling up of the bridges while at district level, the construction varied a lot.

The SAKIRP principles of alignment with market dynamics and local contribution are important tools to enhance ownership, improve communication and identify core priorities. The individual readiness to seize the opportunities offered by a project like SAKIRP, have however varied between local governments, farmer groups and TARURA district offices.

To avoid donor dependency, the starting point was to work with existing producer groups that have a minimum track record on the ground and not to create specific project related groups. A lot of efforts have been invested in the capacity building of AMCOS and extension workers through on-the-job training. These efforts foster local ownership and post-project sustainability.

Ownership by the private sector (farmers, aggregators, processors and international firms) in structured bean market linkages is a sustainability factor which hinges on the capacity of AMCOS to offer reliable services in terms of volume, quality and management. The ownership by Pyxus was excellent with both partners co-funding the activities in the sunflower value chain but then Pyxus pulled out of structured arrangements because of high levels of side-selling that was caused by the attractiveness local sunflower oil processing. Pyxus is still willing to purchase any stock of sunflower that will be produced but is no longer ready to invest in production support. The formalisation of the business membership organisation of crop traders and processors will contribute to the sustainability of trading activities across all value chains. The continued involvement of traders depends a lot on the profitability of the value chain.

Contribution to institutional and management capacity

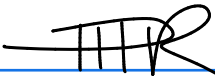


SAKIRP has been a key player in improving the performance of local government extension services. The experience shows that capacity improvement of extension workers is possible if a dedicated performance management system is put in place. The government recommends that 20% of the crop cess is used to fund the operational cost (that are now supported by SAKIRP) however in practice this is very difficult given the very limited local revenue of districts. The mobile phone information system (and Kobo toolbox) appears quite manageable by local authorities. In order to sustain the mobile data collection a stronger alignment with LG data requirements is required.

SAKIRP supports the policies of the Ministry of Agriculture directly through hands-on implementation, investments and experimenting with modalities to adjust to the context on the ground. The examples and lessons learnt (dealing with constraints AMCOS, commercialisation smallholder farms, edible oil sector,) in Kigoma will contribute to robust guidelines in the future.

1.3 Conclusions.

1. SAKIRP has been successful in 2021 to increase the income of smallholder farmers through the structured production and aggregation of beans with AMCOS and the scaling up of sunflower production in Kigoma. Sunflower is now the fastest growing contributor to beneficiary household income, with an 85% increment in its contribution compared to its contribution in 2020. The pilot of soybeans is promising and will further diversify smallholders' income and add to the resilience of the farming system.
2. In line with the MTR recommendation to prioritize quality over quantity, SAKIRP has continued focusing on a limited number of AMCOS as vehicles for increased smallholder capacity building and market / financial linkages. For AMCOS members, the benefits have been significant: annual income growth rate of 15% and absolute household income was 122% above that of non-beneficiaries. Access to input loans increased to 99% for AMCOS members. The bean price obtained through WFP trading was 45% higher. The number of mixed crops AMCOS has increased through twinning young farmer organisations with more experienced cooperatives. Membership resource mobilisation, financial management and access to credits are the main challenges to scaling up this income made through AMCOS and make a regional wide impact on poverty alleviation. Whether SAKIRP can turn this situation around will depend on the good governance structures and long-term business orientation of AMCOS and the willingness of banks to take more risks under the PASS / SAKIRP agricultural commodity loan guarantee facility.
3. In 2021, the agricultural value chain financing took off in collaboration with TADB. TADB provided a total credit line of 0.9 billion Tshs to smallholder AMCOS. The SAKIRP/ PASS co-guarantee fund reduced the risks of TADB to do business with the Kigoma mixed AMCOS and leveraged the TADB funding. Other enabling factors were the contracts for beans and sunflower with WFP, gains Silverlands and Pyxus. Credit delivery for aggregation is less expensive and risky than input credit provision. The in-kind input credits for beans and sunflower made a big difference locally but are difficult to scale-up. Nevertheless, the in-kind loans are improving the management capacity of AMCOS. Credits are therefore best focused on financing the aggregation. AMCOS made profits through bean trading and not through structured production.
4. Through SAKIRP facilitated credit and extension, the production of sunflower increased to 1200 tons in 2021 and contributed considerably to the income improvement of smallholder farmers. With the success in 2021, sunflower has become a prominent element of the farming system in Kigoma improving its climate change resilience, income diversification and opportunities for local value addition. Smallholder farmers prefer to process their sunflower grain and sell oil instead of selling unprocessed sunflower grain. As a consequence, the collaboration with Pyxus could not be sustained. It is however anticipated that in the future the regional production will exceed the absorption capacity of local processors and that bigger firms like Pyxus will be required to avoid a price slump.
5. Cassava prices are slowly recovering but overall production remains resilient. The crop is threatened by cassava brown streak virus and now offers limited income and processing opportunities. In 2021, the income of smallholder farmers has improved because of the bean production and marketing. Unfortunately, bean production is highly vulnerable to adverse weather patterns which are characteristic of changing climatic conditions. The adoption of sunflower as a third value chain has offered new perspectives for better crop rotation, improved & diversified income, local value addition, collaboration with the private sector and climate risk mitigation.
6. The biggest bottleneck to value chain development and market integration for smallholder farmers remains low productivity. income, local value addition, collaboration with the private sector and climate risk mitigation. While production is widely spread and extensive in nature, it is not adequately concentrated to make the resultant volumes commercially viable for large-scale buyers. To address this weakness, the project's structured production and marketing linkages are aimed at generating economies of scale in high-potential areas. De-risking the production node of all value chains is a precondition for attracting private funding for downstream activities of aggregation and marketing. To this end, the project strategically deployed the AMCOS-managed agricultural input revolving fund.

7. The beneficiaries appreciate the improved services of the local government agricultural extension through the collaboration with SAKIRP. The relatively high appreciation scores of 77% - reflect the difference with the status prior to SAKIRP involvement (50% at baseline). More can be done to make WAEO services better result and farmer oriented. The FAAB coaches have an appreciation score of 90%, up from 83%. FAAB coaches play an important role as AMCOS shadow managers and as informal warehouse managers for TADB.
8. The region-wide construction of stone arch bridges for improving the rural road network demonstrated the structural strength of the technology and the important budgetary advantages. The target of 70 bridges will be achieved. The national agency TARURA has understudied the technology in Kigoma. The TARURA board decided to mainstream stone arch bridges in the national plan and budget. The community contribution for bridges built local ownership but also reduced the speed of construction. The community contribution principle might need to be reviewed to allow for full budget absorption in remaining limited time frame.
9. The last year of implementation will put the focus on the exit strategy and the consolidation of successful activities such as financial linkages for AMCOS, capacity enhancement for the SME BMO and further anchorage of AMCOS within the regional and district cooperative management structures.
10. The no-cost project extension will allow for the further consolidation of value chain development initiatives for cassava and beans, fully exploit the value addition and income generating opportunities of sunflower and expand the access to markets / bridge component. There will still be 2 beans and one sunflower season to build the capacity of the most dynamic AMCOS to aggregate produce, manage membership and access bank loans.
11. The budget turn-over is 70% at the end of 2021. The construction of 8 AMCOS warehouses, the main regional crop commodity market and the investment in phytosanitary pilot zones for cassava will contribute to the full budget absorption during the remaining year.

National execution official	Enabel execution official
 <p data-bbox="212 1193 782 1227">Joseph Rubuye (Mar 16, 2022 12:11 GMT+3)</p> <p data-bbox="201 1270 533 1330">Joseph Rubuye SAKIRP project coordinator</p>	  <p data-bbox="818 1270 1118 1330">Steven Hollevoet SAKIRP project manager</p>

2 Results Monitoring²

2.1 Evolution of the context

2.1.1 General and institutional context

The Tanzanian government agricultural policy aims at job creation, intensification of agriculture, commercialisation of smallholder farming, value addition, the creation of mixed crops AMCOS to obtain economies of scale and the promotion of agricultural commodities as raw materials for the industrialisation drive. 2021 has seen a policy approach more geared to more market liberalisation in the agricultural sector to reinstall private sector confidence and boost trade.

Given its remote geographical position from the main markets in Tanzania, economic growth opportunities of Kigoma rely strongly on the export business with East African countries. The ongoing construction of tarmac roads and the planned connection to the national electricity grid will improve the overall competitiveness of Kigoma region. Burundi and Tanzania have approved the construction of the standard railway gauge from Uvinza to Gitega. This railway line will open up new opportunities for mineral trading and agribusiness

The governments of Tanzania and Burundi agreed to enhanced voluntary repatriation and a general backing for the refugee camp closure. With the closure of the markets in the camps, neighbouring farmers lost an important outlet especially for cassava and maize. On the other hand, WFP is making an effort to source beans and maize from local farmers in Tanzania. The ongoing border closure between Rwanda and Uganda, led to more Rwandese traders coming to Kigoma for the purchase of maize and cassava.

In 2021 throughout the year there was an above average rainfall with Lake Tanganyika reaching its highest water levels in May. The 2021/22 agricultural production season started with a dry spell after some initial rains. Some farmers had to plant again and late. The moderate levels of rainfall led to a good bean crop development with little disease pressure in Oct- December.

Compared to 2020, beans prices reduced by 45% in 2021. The recovery of cassava production in Rwanda and Burundi triggered a structural decline in prices of both fresh and dried cassava in Kigoma. This caused a continued drop in cassava export volumes from Kigoma to Burundi. The danger of cassava brown streak virus lingers on as the virus is established in some wards of Uvinza, Kasulu and Kakonko.

The prices for sunflower (up 40%) and soybeans (up 60%) were excellent.

For Kigoma Region, the central government has a strong drive to promote the palm oil value chain with the aim of import substitution and supply raw materials for the industrialisation policy. The Ministry of Agriculture emphasised the creation of AMCOS for mixed crops. With the help of these AMCOS, farmers should be able to move from subsistence farming to economic production.

During the logistical challenges and demand surge of the post covid period, fertilizer and seed prices increased between 50-70% making the inputs unaffordable for many smallholder farmers. As a consequence, it is expected that food prices will increase in 2022.

The government started a country wide vaccination campaign against covid-19. Tanzania did not shut down its economy in 2021. The government allowed businesses and institutions to operate with a minimum of restrictions to ensure employment and prevent economic depression. In 2021, the government support for international organizations and its appreciation of their work in Tanzania improved. Permits and VAT exemptions have been granted again on a regular basis.

² Impact refers to global objective, Outcome refers to specific objective, output refers to expected result

2.1.2 Management context

2.1.2.1 Partnership modalities

The Ministry of Agriculture is the line ministry for the coordination of the SAKIRP project at national level. The project is supervised by a steering committee composed of delegates from the Kigoma Regional Secretariat, the Ministry of Finance and Planning, the President's office for Regional Administration and Local Governments, the Ministry of Agriculture and Enabel. The Kigoma RAS is the chairperson.

The project implementation unit is anchored in the Kigoma Regional Secretariat. This is relevant for a bilateral project and offers opportunities for coordinating with local government authorities and agricultural projects. The Project Coordinator is the Regional Agriculture Adviser who holds the mandate for coordination of agriculture-related interventions. In the districts, the DFP is responsible for coordinating activities of extension staff and has direct oversight from the DED.

SAKIRP has limited grant agreements. Most of the activities are directly implemented with the local government, beneficiaries and the private sector. SAKIRP has worked with different commodity firms and agro-input suppliers linking them to AMCOS whilst mitigating the risks and costs of doing business with smallholder farmers. WFP is an important partner and market off-taker for beans produced by AMCOS and fed into the food supply chain for refugee camps in Kigoma.

The project's sub-granting arrangement with PASS Trust is continuing with a focus on the administration of the credit co-guaranteeing facility. The element of subsidised business development services has been discontinued and standard PASS Trust practices will be applied in the provision of business development services to farmer cooperatives and SME borrowers.

The project collaborates with TCCIA in building the capacity of an association formed by SMEs that were identified and trained. The SME Business Membership Organisation/BMO has been affiliated to TCCIA so that it can benefit from business and policy advocacy actions that the latter undertakes.

In 2021, the following changes happened:

- The collaboration with TADB was stepped up to provide aggregation loans to AMCOS and grow the TADB portfolio in Kigoma.
- There was a large turnover of district executive directors and district commissioners after the reshuffle of the general elections in 2020.
- 5 pre-AMCOS attained the status on full-scale mixed crop AMCOS bringing the tally of mixed crop AMCOS supported by the project to 19. Meanwhile, the pilot of working with tobacco AMCOS to diversify into sunflower farming failed resulting in the dropping of four (4) AMCOS that had been included in the sunflower pilot.

2.1.2.2 Operational modalities

After a due diligence assessment by the external debt committee of the Ministry of Finance, SAKIRP was extended till June 2023. The SAKIRP TFF addendum for the extension was approved by all parties and the exchange of letters between the Ministry of Finance and the Belgian Embassy concluded.

VAT exemption challenges delayed the implementation of activities during the reporting period as TRA insisted on the upfront VAT payment. As part of the risk management, the construction modality for AMCOS warehouses was changed to force account instead of full contract. The VAT exemption matter was resolved in August 2021 with the assistance of the Kigoma regional secretariat, the Ministry of Finance and TRA. Albeit the bilateral agreements, the work permits of expatriate staffs were halted for a considerable period. The new government granted again exemption certificates for expatriate workers from August 2021.

SAKIRP follows the financial management and procurement regulations of the Belgian partner (*regie* management). The reorganisation of the administrative and finance team is on-going to create integrated service centres for Enabel projects in Tanzania. Some positions in the administrative organisational chart have been vacant. Enabel projects are using a cashless financial system based on M-Pesa, in addition to the internet Banking system. Technical assistance - both local and international - is an important feature. SAKIRP has 2 cluster offices Kasulu/ Buhigwe and Kakonko/ Kibondo to offer better services at the grassroots and increase efficiency.

2.2 Performance outcome

This section describes progress made at performance outcome level by linking the outputs with the outcome as visualized below:



2.2.1 Progress of indicators

Specific Objective: Smallholder's income is increased and diversified in Kigoma region, especially for women, through pro-poor value chains development											
Indicator	Baseline			2018		2019		2020		2021	
	Endline Target	Baseline Year	Baseline Value	Target	Actual	Target	Actual	Target	Actual	Target	Actual
Io.1a - % Increase in smallholders' income derived from cassava	2%	2017	0%	2%	-3%	-10%	-18%	-5%	-11%	0%	-14%
<i>Male</i>	-	-	0%	-	-1%	-	-19%	-	-9%	-	-18%
<i>Female</i>	-	-	0%	-	-4%	-	-18%	-	-13%	-	-10%
Io.1b - % Increase in smallholders' income derived from beans	12%	2017	0%	Target 2%	Actual 4%	Target 4%	Actual 4%	Target 8%	Actual 20%	Target 10%	Actual 13%
<i>Male</i>	-	-	0%	-	6%	-	8%	-	23%	-	19%
<i>Female</i>	-	-	0%	-	2%	-	1%	-	18%	-	5%
Io.1c - % Increase in smallholders' income derived from sunflower	10%	2019	0%	Target -	Actual -	Target -	Actual 0%	Target 2%	Actual 1%	Target 5%	Actual 5%
<i>Male</i>	-	-	0%	-	-	-	0%	-	2%	-	5%
<i>Female</i>	-	-	0%	-	-	-	0%	-	1%	-	5%
Io.2a - Total value of cassava traded by smallholder beneficiaries [Billion TZS] - cumulative	40	2017	3	Target 12	Actual 10	Target 18	Actual 14	Target 25	Actual 18	Target 33	Actual 20
<i>Male</i>	-	-	1	-	4	-	5	-	7	-	8
<i>Female</i>	-	-	2	-	6	-	8	-	11	-	13
Io.2b - Total value of beans traded by smallholder beneficiaries [Billion TZS] - cumulative	1	2017	25	Target 8	Actual 6	Target 12	Actual 10	Target 17	Actual 15	Target 22	Actual 18
<i>Male</i>	-	-	0.5	-	2	-	4	-	6	-	7
<i>Female</i>	-	-	0.5	-	3	-	6	-	9	-	11
Io.2c - Total value of sunflower traded by smallholder beneficiaries [Billion TZS] - cumulative	1	2019	0.03	Target -	Actual -	Target -	Actual 0.03	Target 0.4	Actual 0.07	Target 0.7	Actual 0.31 ³
<i>Male</i>	-	-	0.01	-	-	-	0.01	-	0.03	-	0.13
<i>Female</i>	-	-	0.02	-	-	-	0.02	-	0.04	-	0.18

Source: SAKiRP household surveys 2017- 2021 & SAKiRP Farmer Groups Database

³ The estimated processed value generated by SAKiRP is around 700 million TZS more than reported, with at least 700 tons of sunflower being side sold and therefore not passing through official statistics.

Analysis of progress made

Analysis of progress made towards outcome:	
<p><i>Relation between outputs and the Outcome. (How) Are outputs (still) contributing to the achievement of the outcome:</i></p>	<p>Result 1: Value chain management coordination mechanisms installed</p> <p>Key message: Cassava and bean traders still express a good level of trust in farmers. On the other hand, the producers' confidence has dropped. Value Chain Finance solutions need to be found for facilitating early payments and early communication of price changes hence improving trustful relationships between smallholder farmers and buyers. The firm Pyxus pulled out their structured support to sunflower production in Kigoma because of their perceived massive side-selling by AMCOS members.</p> <p>Synthesis: Relationships between beneficiaries and buyers have suffered relative to baseline as because of the delayed payments for produce (WFP) delivered and perceived arbitrariness of price changes (informal cassava buyers, Pyxus for sunflower) and non-respect of contract farming agreements in sunflower.</p> <p>Supporting data: For beans, 22% of beneficiaries versus 21% of non-beneficiaries consider themselves to have a trustful business relationship. At baseline, this was 24% versus 27% respectively. For cassava, 14% of beneficiaries versus 25% of non-beneficiaries currently consider themselves to be in a trustful business relationship. At baseline, this was 24% versus 27% respectively.</p> <p>For sunflower, 40% beneficiaries versus 50% non-beneficiaries currently consider themselves to be in a trustful business relationship, as do 47% of SPM beneficiaries. At baseline this was 37% versus 33% for beneficiaries and non-beneficiaries respectively. In this case, there has been an increase in perception of trustful business relationships but with a reversal relative to baseline; now the non-beneficiaries are more trustful of sunflower buyers than the beneficiaries, while the opposite was true at baseline.</p>
	<p>Result 2: Financial mechanisms developed and financial organizations strengthened to support VCD</p> <p>Key message: Agricultural input revolving funds have played an important role in stimulating structured production and promoting access to markets for smallholder farmers. Revolving in-kind loans have played a catalytic role in mobilizing smallholder farmers to engage in collective action as they increase the attractiveness of AMCOS as a farmer-based organization. Furthermore, in-kind loans have served to mitigate the risks associated with lending to smallholder farmers. In 2021, in-kind loans were one of the factors which made it attractive for TADB to lend funds for aggregation of beans. Similarly, the credit co-guarantee facility implemented in partnership with PASS Trust has been influential in unlocking commercial finance to scale up both production and aggregation financing. Both direct and indirect beneficiaries of formal value chain financing are estimated at 4000 farmers.</p> <p>Synthesis:</p> <p>For beneficiaries, access to informal agricultural financing (in-kind loans, VICOBA/VSL, SACCOS) has remained stagnant but still constitutes the main source of agricultural finance for smallholder farmers. However, for structured production financing, smallholder farmers are highly dependent on the in-kind input loan scheme.</p> <p>Although some AMCOS accessed formal bank loans as commodity aggregation financing, most smallholders still classified this as an informal loan from the AMCOS rather than a formal loan from the bank; this reflects a low reporting rate for banks as sources of finance for beneficiaries.</p> <p>Supporting data:</p> <p>For beneficiaries, access to informal agricultural financing (in-kind loans, VICOBA/VSL, SACCOS) have stagnated at 23-24% of beneficiaries accessing them. However, for structured production (SPM) this value shoots up to 99% of SPM beneficiaries accessing the informal loans via in-kind loans from the AMCOS revolving funds.</p> <p>Less than 1% of respondents considered themselves to have access to formal (bank) financing. As indicated above, this is because smallholder farmers access loans indirectly via the AMCOS which coordinates the borrowing process. 0.9 billion TZS was accessed by AMCOS under the credit co-guarantee facility for both crop aggregation. The repayment rates of revolving funds within SPM beneficiaries stands at 89%, just a percentage point below the target of 90%. Aggregation financing loans provided TADB to AMCOS saw the volume of aggregated and collectively marketed beans increase by over 300%. The number of smallholder farmers who benefited from in-kind loans is estimated at 4000.</p>

Analysis of progress made towards outcome:

Result 3: Public and private chain supporters provide functional services to value chain actors

Key message: The SAKIRP assistance enabled local government authorities to provide better extension services in the previous years. However, these quality extension services could not be sustained as some wards were phased out and the SAKIRP support turned from extension groups to AMCOS. Private sector actors (Farming as a Business coaches) perform better but still require sustainable strategies to enable them to continue providing services beyond the life of the project.

Synthesis: the perception of the value of extension services has gone down significantly between 2020 and 2021. Though this is still higher than at baseline, the appreciation of private sector actors, in the form of FAAB coaches, has increased considerably.

Supporting data:

the perception of the value of extension services has gone down from 96% of beneficiaries finding value in their services in 2020 to 77% in 2021. Though this is still higher than the 50% at baseline, private sector actors in the form of FAAB coaches have shown a jump in appreciation in the value of service provided from 83% on first measurement in 2020 to 90%.

Touch points between beneficiaries and extension officers average 5 per year, which is the same number of touchpoints between FAAB coach and beneficiaries with access to FAAB services per year. Ultimately, difference seems to be a difference in the quality of services delivered

Result 4: Stronger position of smallholder beneficiary in value chain through improved productivity, economic integration and empowerment

Key message: Though there has been a constant upward trend in GAP adoption and yields, there is still room for improvement through intensifying capacity building as only half of beneficiary groups are classified as professional in accordance with Capacity Performance Index (CPI) scoring. AMCOS, though performing better in CPI evaluation, GAP adoption and yields also show there is room for impactful improvement, but still provide a strong argument on the benefit of focusing on structured production and marketing via AMCOS.

Synthesis: Beneficiary GAP adoption for cassava, beans and sunflower has been increasing over time relative to baseline. The same upwards trends can be seen for yields. SPM GAP adoption and yields is even higher than for beneficiaries.

Group capacity as measured by the CPI tool show and increasing proportion of groups classified as professional relative to baseline and preceding years. The first CPI evaluation of AMCOS shows a greater proportion of professional AMCOS compared to farmer groups though the need for further capacity building is evident.

Supporting data:

Yields for cassava are up to 4.1 from 2.9 T/ha at baseline for beneficiaries, with GAP adoption going from 10% at baseline to 42% currently.

Yields for beans have stagnated at around 530 kg/ha for beneficiaries, although SPM beneficiaries are on an upwards trend with current yields at 638 kg/ha. GAP adoption has gone from 18% to a current 54% for beneficiaries.

Yields for sunflower have gone up from a baseline value of 523 kg/ha to a current value of 747 kg/ha. GAP adoption has gone up from 19% at baseline to a current 82% for beneficiaries.

For 86% of beneficiary smallholder farmers, the sale of crops remains the main source of income. Beans has supplanted cassava as the biggest income generating crop from a list of commonly grown crops in Kigoma in 2021, with sunflower rising from 7th position in 2020 to 6th position in 2021 (see Figure 9 below). Beneficiary producers get on average 592,000 Tsh/ year from cassava, 563,000 Tsh from beans and 461,000 Tsh per year from sunflower. Sunflower added to the income diversification and resilience of targeted farming households. The strengthening of non-organised producer groups and productivity has only had a modest contribution to the income of smallholder farmers contrary to the strengthening of AMCOS through structured production & marketing arrangements which made a real difference on smallholder income.

Analysis of progress made towards outcome:	
	<p>Result 5: Improved market access and sustainable trade</p> <p>Key message: Market access for both beans and sunflower farmers increased over the reporting period. The organization of smallholder farmers into agricultural marketing cooperatives (AMCOS) and integrated value chain financing mechanisms have contributed to improved market access for smallholder farmers. Both direct and indirect beneficiaries have been linked to more formal and structured markets for beans and sunflower grains. While the market for cassava has not expanded, the trade has gotten back to a sustainable path due to household-level adjustments which saw non-efficient farmers exiting and the more efficient ones benefiting from the price recovery.</p> <p>Synthesis: At least 20% of direct beneficiaries have been linked to formal and reliable markets through their AMCOS. Over the past season, an estimated 4000 farmers collectively sold their beans to WFP. 1400 farmers were directly linked to Pyxus Tanzania for the sale of unprocessed sunflower grain. The transformation of smallholder organization from small and low-clout groups to AMCOS is a huge boost to market access and sustainable trade because it creates economies of scale, mitigates financing risks and lowers transaction costs for formal buyers.</p> <p>Supporting data: The number of farmers with access to formal markets for beans improved from 450 (3%) in 2019 to 1600 (16%) in 2021. The volume of beans traded increased from 106 tons in 2019 to 1300 in 2021. The number of indirect beneficiaries who were able to access collective markets in 2021 stood at 2400 farmers. The improved access of AMCOS organisations to aggregation financing helps to open up market access to a much greater number of indirect project beneficiaries. In the case of sunflower, the rate of access to informal markets is far much higher as farmers channel the bulk of their produce to local processing facilities so that they can benefit from the additional margin obtained when the end product is oil and not just unprocessed grain.</p>
<i>Progress made towards the achievement of the outcome (on the basis of indicators):</i>	<p>Key Message: Strategic focus on structured production and marketing (SPM) and support to AMCOS has a significantly higher impact on increasing household income than a focus on farmer extension groups. Future efforts should aim to solidify this approach for high impact interventions and the opportunities for scaling up rural poverty alleviation, provided committed AMCOS management is in place.</p> <p>Synthesis: Although household income of direct smallholder beneficiaries has risen since baseline, the income increase is not significantly different from the rise in HH income in non-beneficiary households. However, SPM households show a significantly higher than average income growth.</p> <p>Supporting data: HH income has increased by 24% from baseline for beneficiaries, 33% for non-beneficiaries and 47% in households involved in SPM. Due to better organization and collective bargaining power, farmers that are in structured marketing arrangements tend to get higher than average prices for their agricultural commodities.</p> <p>The total value of beans and cassava traded by smallholder farmers remained below project targets especially for cassava. There are difficulties in tracking actual volumes because of the predominance of informal transactions. In structured bean marketing, targeted volumes could not be reached due to low productivity and high incidence of side-selling by supported farmers due to late WFP payments. In 2021, the number of direct beneficiary farmers dropped from 11 171 to 7 790 (67 % women) due to further geographical consolidation and the focus on AMCOS, quality and future impact.</p>
<i>Gender</i>	<p>As with men, female income progressively improved over the intervention years of t but gender disparities still exist especially regarding size of participation in AMCOS, access to credits, land cultivated, yields and commodities collectively sold. For beans, while the absolute number of women directly reached increased to 615 in 2021 (from 408 in 2020); the participation rate of women farmers in structured production decreased from 42% in 2020 to 38% in 2021.</p> <p>The income of female headed HH was similar as mixed HH except for those participating in structured production and marketing where the gender disparity was -41%. This is attributed to the need for strict selection of the credit preparedness of AMCOS members.</p>
<i>Issues that arose, influencing factors (positive)</i>	<ul style="list-style-type: none"> The SAKIRP – PASS co-guarantee fund attracted a lot of interest of TADB which moved its western zonal office to Kigoma in recognition of the value chain financing

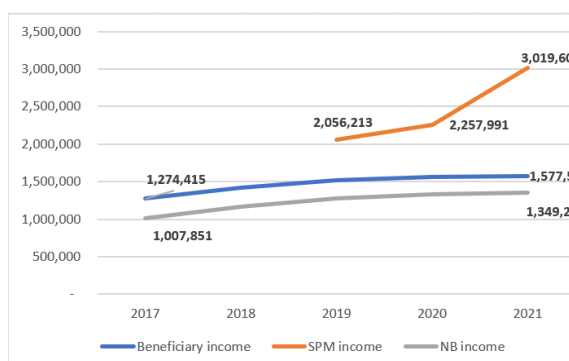
Analysis of progress made towards outcome:	
<i>or negative):</i>	<p>opportunities primed by the SAKIRP project</p> <ul style="list-style-type: none"> • Cassava prices are slowly recovering but will not reach the boom levels of 2015-17. Sporadic export bans for maize in Tanzania influence the price setting. • The dry spell in March 2021, affected the bean and sunflower yields & production negatively. • The closure of the Rwandan – Ugandan border attracted more Rwandan traders to Kigoma region to buy maize and cassava.
<i>Unexpected results:</i>	No remarks

Progress made towards the achievement of the outcome (on the basis of indicators):

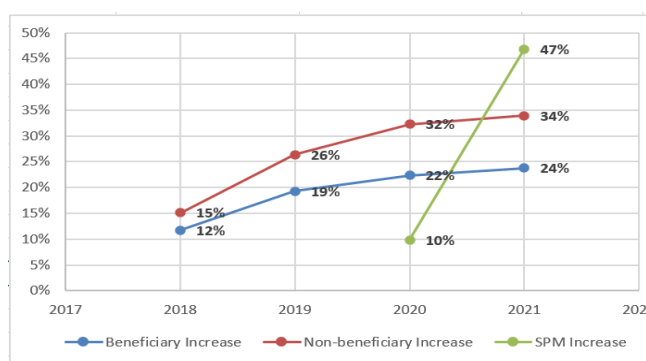
Overall income

During the past 3 years, the income of smallholder beneficiaries working with SAKIRP has increased considerably by 24% at an average rate of 6%, per annum which, however, is equally valid for non-beneficiaries. In 2021, the yearly global household income amounted to 1,350,000 Tsh, 1,580,000 Tsh and 3,020,000 Tsh for n-on-beneficiaries, beneficiaries and beneficiaries involved in structured markets, respectively. Attributing the income increase to specific interventions is an almost impossible exercise, as over the past years Kigoma has become a mosaic of interventions with overlapping target groups and activities. Direct attribution is therefore difficult to claim for SAKIRP beneficiaries in general, as the control group might have received other treatments. However, given SAKIRP very focused support towards SPM beneficiaries via AMCOS, the 47% increase in SPM income relative to baseline is largely attributable to the project's efforts.

2Figure: Changes in smallholder household income over time



3Figure: % change in smallholder household income from baseline



Source: SAKIRP HH surveys 2017 & 2021

Income from beans and cassava

After a structural price slump back in 2018, the cassava market started recovering slowly in 2020, and average prices in 2021 also being higher than in 2020. On the other hand, in 2021, bean prices trended downwards leading to a reduction in the contribution of beans to beneficiary household incomes from 660 000 in 2020 to 563 000 in 2021. Farmgate prices dipped as low as 1 300 Tsh/kg for beans as compared to a high of 2 000 Tsh/kg at the same time last year. However, this slump did not affect farmers in structured marketing arrangements as they still managed to get a price of 1950/kg from WFP.

Figure 4: Trend in median farmgate bean prices

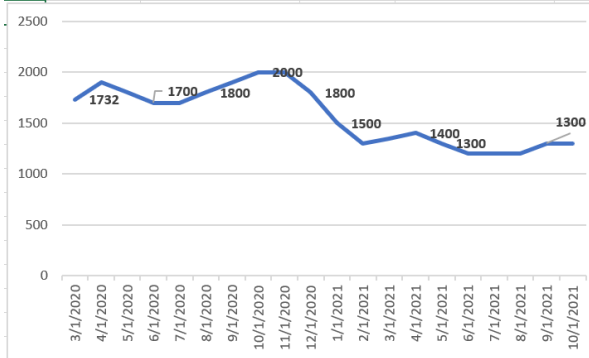
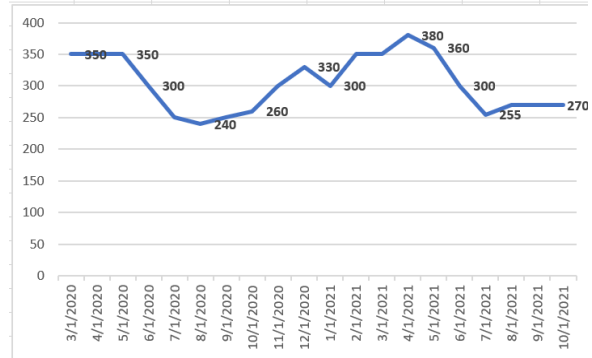


Figure 5: Trend in median farmgate cassava prices



Source: SAKiRP Market Survey (2018-2020)

Figure 6: Trend in average beneficiary households' annual revenue from SAKiRP crops

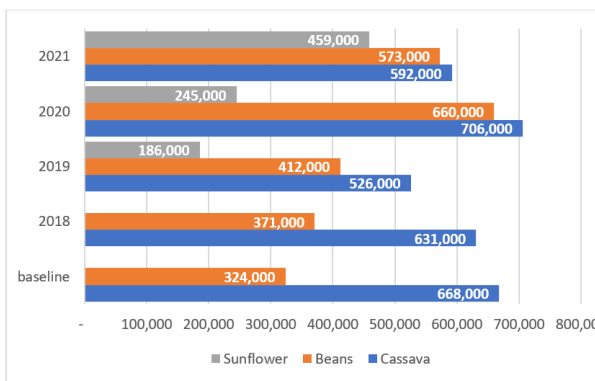
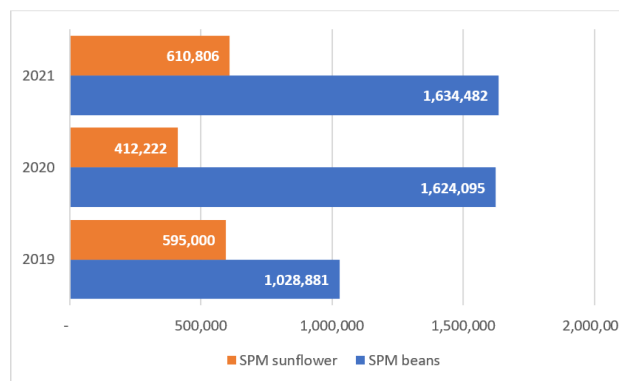


Figure 7: Trend in average SPM households' annual revenue from sunflower and beans



Source: SAKiRP HH surveys 2017-2021

When taking cultivation trends into account, i.e., the change in number of beneficiaries cultivating a specific crop, it becomes clear that the sales of beans is the largest contributor, whereas the sales of cassava has reduced its contribution to the average household relative to its baseline contribution. This persisting reduction in contribution of cassava is mainly explained by the considerable share of beneficiaries that have stopped cassava production, despite the increase in income among those who continued cassava cultivation. Although revenue derived from sales of sunflower increased by 216 000 Tsh, it did not impact the average beneficiary household income as it was negated by the reduced contribution of cassava and beans. Despite low prices, cassava is still retained in the farming system because of its adaptability, low input requirements, tolerance to late planting & adverse weather conditions. It serves as a hedge against growing risks facing farmers.

Figure 8: Prevalence of crop cultivation

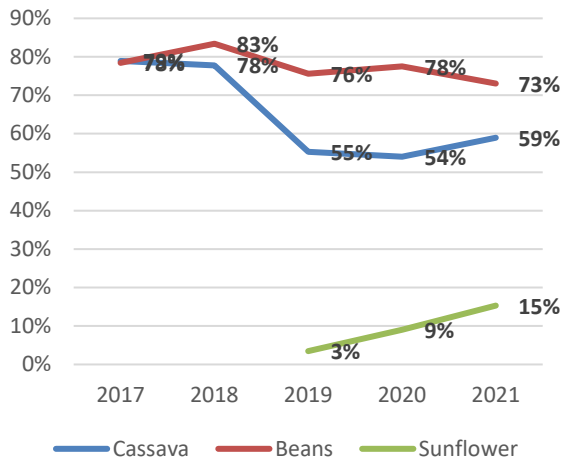
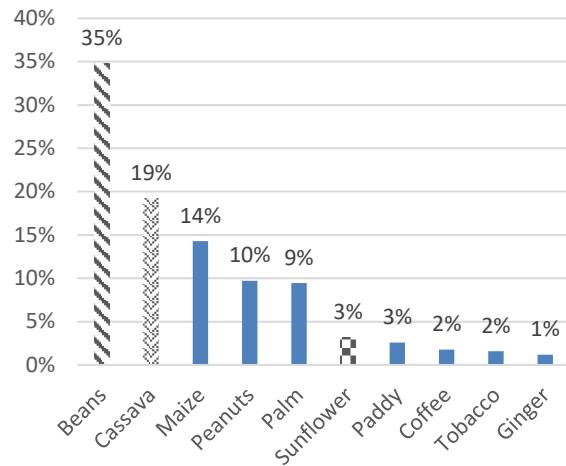


Figure 9: Most important household income generating crop



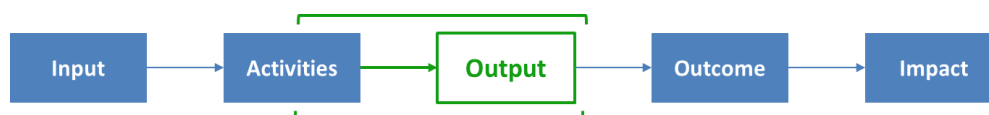
Source: SAKIRP HH surveys 2017 & 2021

2.2.2 Potential Impact

The SAKIRP experience is expected to be transformative with regards to:

- The project has created a critical mass of mixed crops AMCOS with hands-on experience of structured production, marketing and financial linkages. These AMCOS have already a reasonable capacity and equipment to ensure produce quality, manage contracts, aggregation and credits. They act as an example to less organized farmers' groups. Commodity traders, WFP, TADB, local governments and other donors can build on this pool of AMCOS to further consolidate their capacity and create economies of scale and make agricultural value chains more efficient in Kigoma region.
- The SAKIRP hands-on approach to mixed AMCOS in Kigoma is an interesting case study that the Ministry of Agriculture can use to further finetune and expand its policy and guidelines for capacity building and oversight of cooperative societies.
- Due to the extension, marketing & credit services provided, sunflower has already become a permanent value chain in Kigoma region increasing and diversifying farmers' income, opportunities for local processing and improving the climate change resilience of the farming system. The same is expected to happen to the soybean pilot that will be scaled up in 2022/23.
- For the first time, smallholder AMCOS were able to meet the stringent WFP procurement requirements to deliver beans to the refugee camps. This has created enthusiasm and goodwill to expand the WFP smallholder programme amongst donors and the institution.
- The introduction of Kobo-toolbox set an example of mobile data collection and 2-way communication to improve the management of agricultural departments. Kigoma Region will be an example on which the Ministry of Agriculture can build.
- Farming as a business training and the accompanying agribusiness interventions will orientate smallholder producer groups towards commercial farming and competitiveness.
- Enhanced performance of the local government extension system in the targeted wards of Kigoma region through better training, supervision and working tools. The ward agricultural extension officers will thus potentially benefit agricultural producers for years to come provided equipment is maintained and supervision in place.
- With the construction of more than 80 bridges, SAKIRP will have improved and expanded the rural road network in Kigoma region. A pool of experienced masons and TARURA technicians will ensure the continuity of the stone arch bridges. While TARURA is mainstreaming the stone arch bridges in its national budget, considerable costs savings will be made and the its service provision will increase by 80% at national level.
- The demonstration of the strengths and weaknesses of the value chain development concept for smallholder farming in a remote region on which future interventions can built

2.3 Performance output 1: value chain coordination.



2.3.1 Progress of indicators

Result 1: VC management & coordination mechanisms are installed & steer VCD											
Indicator	Baseline			2018		2019		2020		2021	
	Endline Target	Baseline Year	Baseline Value	Target	Actual	Target	Actual	Target	Actual	Target	Actual
I1.1a - % of farmers perceiving their cassava buyers as trustful business partners	30%	2017	24%	16%	28%	18%	14%	20%	6%	24%	13%
<i>Male</i>	-	2017	22%	-	26%	-	17%	-	6%	-	10%
<i>Female</i>	-	2017	27%	-	30%	-	12%	-	6%	-	17%
I1.1b - % of farmers perceiving their beans buyers as trustful business partners	50%	2017	24%	Target 26%	Actual 27%	Target 30%	Actual 13%	Target 36%	Actual 13%	Target 42%	Actual 22%
<i>Male</i>	-	2017	25%	-	28%	-	15%	-	13%	-	27%
<i>Female</i>	-	2017	24%	-	27%	-	11%	-	13%	-	15%
I1.1c - % of farmers perceiving sunflower buyers as trustful business partners	50%	2019	3%	Target -	Actual -	Target -	Actual 3%	Target 15%	Actual 37%	Target 30%	Actual 40%
<i>Male</i>	-	2019	4%	-	-	-	4%	-	33%	-	42%
<i>Female</i>	-	2019	1%	-	-	-	0%	-	54%	-	38%
I1.2a - % of traders perceiving cassava farmers as reliable suppliers	80%	2017	100%	Target 80%	Actual 100%	Target 80%	Actual 82%	Target 80%	Actual 100%	Target 82%	Actual 94%
I1.2b - % of traders perceiving beans farmers as reliable suppliers	85%	2017	100%	Target 80%	Actual 100%	Target 80%	Actual 82%	Target 80%	Actual 92%	Target 82%	Actual 93%
I1.2c - % of traders perceiving sunflower farmers as reliable suppliers	85%	2019	29%	Target -	Actual -	Target -	Actual -	Target 80%	Actual 100%	Target 82	Actual 50%

Source: SAKIRP household surveys 2017- 2021 & call-back surveys 2017-2021

2.3.2 Progress of main activities

Progress of main activities	A ¹	B	C	D
<i>1. M&E & capitalization framework for VCD are elaborated</i>				
Monitoring by region		X		
Conduct annual household survey		X		
Develop monitoring matrix and data collection tools		X		
Periodic data collection, analysis and progress tracking.		X		
<i>2. Forums for enhancing VC management & coordination are conducted</i>				
Seasonal review meetings beans / sunflower		X		
Regional stakeholders meeting		X		
District coordination meetings agriculture		X		
Project steering committee		X		
<i>3. Project capitalisation products are produced & disseminated</i>				
Develop capitalization products and channels for use of mass media (radio, video, website, brochure etc.)		X		

2.3.3 Analysis of progress made

Indicator assessment

11.1a - % of farmers reporting/perceiving cassava buyers as trustful business partners	This indicator appreciated from a low of 6% in 2020 to 13% in 2021. Farmgate prices for dried cassava increased slightly to 380 Tsh/kg, 9% higher than at the same time in 2020 and this correlates with the increasing positive farmer perception of cassava buyers as reliable business partners
11.1b - % of farmers reporting/perceiving bean buyers as trustful business partners	This indicator appreciated from 13% in 2020 to 22% in 2021 for beneficiaries, and was as high as 80% for beneficiaries in structured production. However, of the 80%, 43% stated that there are elements of the relationship that they are not satisfied with. This is likely linked to long turnaround time associated with the WFP process for procuring commodities from smallholder farmer AMCOS.
11.1c - % of farmers reporting/perceiving sunflower buyers as trustful business partners	This indicator appreciated slightly, from 37% in 2020 to 40% in 2021 for beneficiary farmers. For beneficiaries in structured production, this indicator was at 48%. The slower growth in beneficiary farmers rate of appreciation for sunflower buyers is likely linked to what was perceived as arbitrary pricing and delayed payments from Pyxus Tanzania who were the main market off-taker in 2021.
11.2a - % of trader reporting/perceiving cassava farmers as reliable suppliers	94% of traders perceive farmers as reliable suppliers. This is reflective of the confidence that traders have in the capacity of farmers to deliver volumes required. The contrast in the way these two value chain actors perceive each, other suggests a need for more dialogue to bridge information gaps which lead to different evaluations
11.2b - % of trader reporting/perceiving beans farmers as reliable suppliers	The 93% confidence exhibited by traders in smallholder bean farmers is slightly up from 92% in 2020 with depreciating bean prices making it a buyer's market. This could be partly attributed to the availability of aggregation financing which made it easier for some bean buyers to buy and pay on a timely basis.
11.2c - % of processors reporting/perceiving sunflower farmers as reliable suppliers	Although based on a small sample, only 50% of processors are satisfied with the reliability of smallholder farmers as suppliers of unprocessed sunflower grain. This could be attributed to the rampant side-selling that was evident in 2021 albeit the contract farming agreements between AMCOS - Pyxus. The inability of farmers to supply enough grain to match processing capacity needs could also be a contributory factor to the unfavourable perception.

Value chain coordination

The SAKIRP project promotes value chain coordination at the level of facilitating actors. To this end SAKIRP regularly organises meetings and communicates with the UN Kigoma Joint Program to ensure that there is harmonisation and synergies in approaches taken to support smallholder farmers. Organisations contracted by the WFP, such as Britten, provide services to some AMCOS that are already working with SAKIRP hence the need for constant dialogue to avoid duplication of efforts. SAKIRP also engages with the Procurement Unit of WFP from the perspective of a market off taker for beans. In 2021, SAKIRP shared experiences and lessons at a multi-stakeholder workshop that was held in Dodoma.

At the level of core value chain actors, the project hosted the regional seasonal review workshops which involved farmer AMCOS leaders, market off-takers (WFP, Silverlands and Pyxus), agricultural input suppliers (Yara and Agricultural Seed Agency - ASA) and banks. The seasonal review workshops serve as important platforms for reviewing performance, drawing lessons and planning for upcoming seasonal activities.

Monitoring & evaluation

The MTR commended the SAKIRP mobile M&E system which is seen as an example Kigoma region. Data related to agriculture, price and markets are collected through:

Data sources	Sample	Data collected / application	Data collection Tools used
1. Network ward extension workers	34	monthly activity monitoring, indicator progress tracking, logistical planning, capacity building, learning	Kobo toolbox, QGIS WhatsApp
2. Trader and sunflower processor network	13	Market information: price, quantity, demands for beans & cassava	WhatsApp groups Direct phone calls
3. Bimonthly beneficiary tracking	302	Agricultural data cassava & beans, market, production costs, technology adoption	Kobo toolbox,
4. Annual HH survey	1600	Agricultural, market, credit, HH income, technology adoption, progress	Kobo toolbox, Call backs
5. Annual call-backs survey	460	Government extension, lead farmer & farming as a business services satisfaction	
6. Capacity Performance Index producer groups	302	Accountability, professionalism executive, income diversification, strategic potential, participation, production management, marketing, advocacy	Kobo toolbox, CPI methodology

A variety of smartphone applications and software packages are used. Kobo Toolbox has been serving as the main tool for monthly activity monitoring, indicator progress tracking, logistical planning, capacity



Kobo Toolbox
Open sources platform for data collection and aggregation

WhatsApp
-WhatsApp groups for coordination, sharing information

Internet Browsing
Mobile smart Phones. Provided to WAEOS help to access informant and learn through internet.

QGIS - Mapping
Free source software, is use for geographical presentation of special

Excel databases
Excel: software used by DFPs

Analysed reports
Reporting progress

management system which data on input requirement o this end, data entry forms sed on a PostgreSQL back-

Capitalisation

One of the sustainability strategies is to leave behind a simplified version of the extension monitoring and task evaluation system for use by the DAICOs offices in Kigoma region and document the experience.

2.4 Performance output 2: value chain financial services and infrastructure.

The reporting period coincides with the implementation period of the value chain financing grant that was sub-contracted to PASS Trust. The target of the grant was to support the provision of one billion Tanzanian shillings (€380.000) to smallholder agricultural marketing cooperatives (AMCOS) and agricultural trading SMEs. Against this target the total amount of credit approved banks (TADB and NMB) amount to €395.000. Out of the total amount approved 87% of this amount was for agricultural marketing cooperatives and the remaining 13% was loaned to SMEs.

Borrower category	Loan requested Tsh	Amount approved	Amount utilized	% Repaid to date
AMCOS	1,331,400,000	899,750,000	568,155,000	100%
SMEs	160,000,000	140,000,000	140,000,000	53% ⁴
Total	1,491,400,000.00	1,039,750,000	708,155,000	91%

NB: While smallholder AMCOS received their loans from TADB, SMEs accessed their credit lines from NMB. TADB became the most viable option for funding AMCOS because it was willing to accept the risk associated with making loans to first time borrowers which commercial banks were hesitant to take on board.

Despite the major progress made in assisting smallholder AMCOS to access loans from formal banks, the utilization of the loans was far beyond expectations and only 63% of the credit lines approved by the bank was disbursed and utilized by the respective AMCOS. Given that upfront loan costs are based on the total approved amount, low utilization of loans increases the overall cost of borrowing thereby imposing a strain on the AMCOS finances.

OBJ:

Overall assessment of the targets set for the value chain financing grant

The following table provides an overview of the performance realized under the sub-granting arrangement which the project entered into with PASS Trust.

Indicator	Target	Actual
Value of loans secured for smallholder farmers in TZS	One billion	1.039 billion ⁵
Number of smallholder farmer organizations accessing bank loans	8	5 ⁶
Number of agro-based SMEs accessing bank loans	25	3 ⁷
Repayment of loans made to AMCOS	95%	100%
Repayment of loans made to SMEs	95%	53% ⁸
Beneficiary satisfaction with value chain financing services	80%	88%

While the main outcome of the grant was achieved in terms of attracting banks to lend to smallholder cooperatives, the quality of business development support provided by PASS Trust was generally below expectations. SAKIRP project staff and FAAB coaches still had to assume the bulk of business coaching and mentoring to ensure the success of the loan arrangements.

⁴ SMEs are using the credit lines as working capital and have negotiated for a rescheduling of the loans and as a result their loans are still outstanding when their AMCOS counterparts have long cleared their facilities.

⁵ This represents a combined amount for both SMEs and smallholder AMCOS organizations

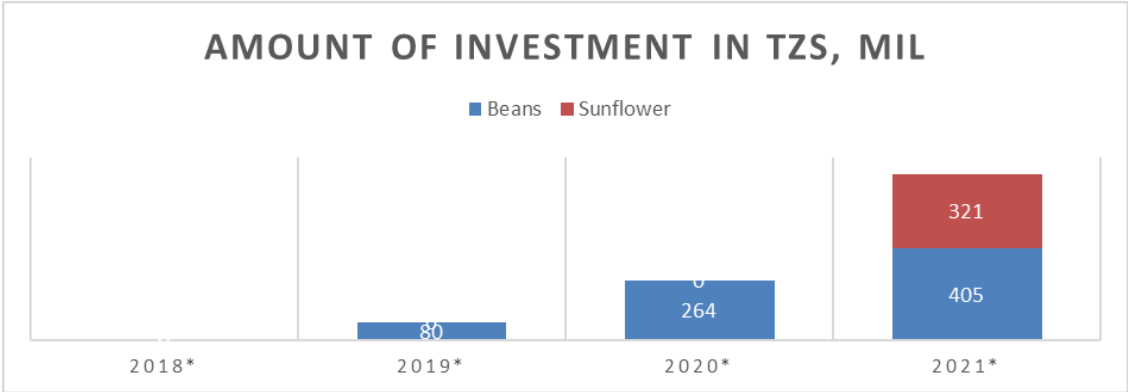
⁶ One AMCOS turned down the bank loan facility citing unfavorable loan terms and conditions. Two AMCOS were blocked from drawing down on their credit lines due to risk associated with poor leadership

⁷ SMEs are considered high risk borrowers because of the informal nature of their business

⁸ These loans have been restructured to align with SME traders' trading requirements

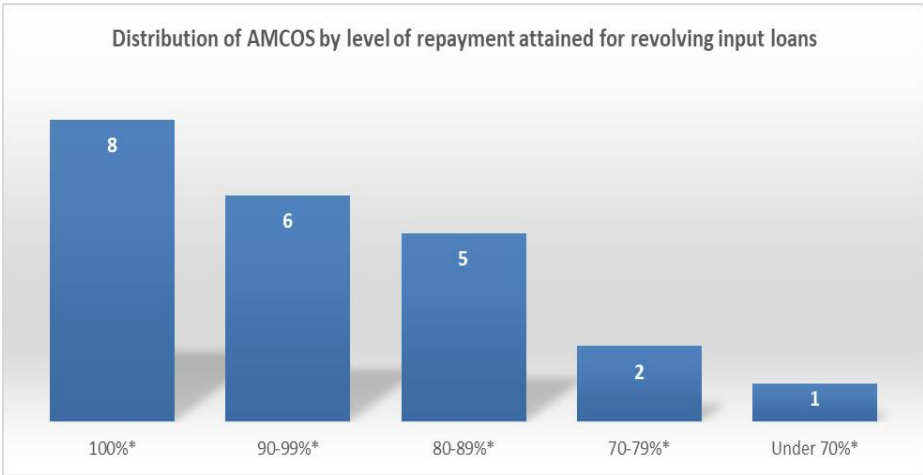
Revolving agricultural input fund (RAIF)

Since the piloting of the revolving agricultural input fund in the 2018/2019 agricultural season, the project has invested a cumulative €312.000. 91% (€283.000) of the total amount is invested in AMCOS organizations whilst 9% (€29.000) is invested in smallholder farmer producer groups which are a more informal type of organization.

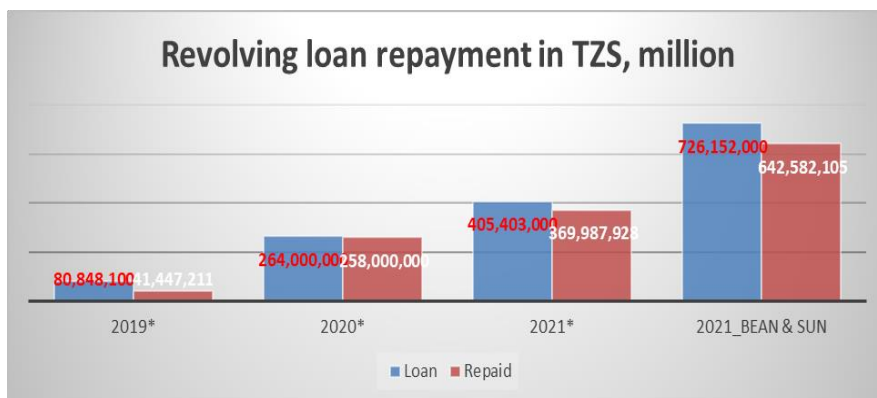


The performance of the agricultural input revolving fund varies between farmers AMCOS and value chain. Generally, input loans provided to support beans have performed better than loans advanced towards sunflower inputs. For the 2020/2021 season the recovery of loans invested in the bean value chain reached 91% whilst recovery of sunflower input loans lagged at 85%. The difference in loan recovery performance between the two value chains can be attributed to the higher susceptibility of sunflower to side-selling due to the lure high returns obtainable when farmers process their grain into oil at local processing facilities. The high demand for sunflower grain increases the chances of farmers selling their produce to informal buyers thereby making it difficult for farmer organizations to recover loans from farmers supported with agricultural inputs.

Out of the 22 farmer organizations that were provided with input revolving funds over the past year, 36% (8) managed to recover their combined (beans and sunflower) input loans in full whereas only one recovered less than 70% of the total revolving fund amount. Efforts to recover outstanding loans are ongoing and most farmers are expected to clear their arrears during the crop selling season which starts in March 2022. The graph below shows the distribution of farmer AMCOS by different input loan recovery levels.



Overall, the performance of input revolving loans improved following the decision to organize smallholder farmers in the form of cooperative societies. From an initial recovery rate of 51% in the pilot phase to the current overall recovery of about 90%, the performance has improved. However, as mentioned earlier, the introduction of sunflower in the input loan portfolio diluted the good performance associated with bean loans. The graph below shows how the annual input loan portfolio performed in terms of overall loan recovery.



2.4.1 Progress of indicators

Indicator	Baseline			2019		2020		2021	
	Endline Target	Baseline Year	Baseline Value	Target	Actual	Target	Actual	Target	Actual
I2.1a - % of smallholder beneficiaries with access to informal agricultural finance by gender	35%	2017	24%	27%	24%	30%	29%	33%	23%
Male		2017	24%	-	24%	-	29%	-	26%
Female		2017	20%	-	24%	-	28%	-	20%
SPM	95%	2019	0%	-	98%	-	97%	-	99%
Male	-	2019	0%	-	96%	-	98%	-	98%
Female	-	2019	0%	-	100%	-	97%	-	100%
I2.1b - % of smallholder beneficiaries with access to formal agricultural finance by gender	10%	2017	1%	3%	0%	5%	0%	7%	0%
Male	-	2017	3%	-	0%	-	0%	-	0%
Female	-	2017	2%	-	0%	-	0%	-	0%
SPM	-	2019	0%	-	0%	-	0%	-	0%
Male	-	2019	0%	-	1%	-	0%	-	0%
Female	-	2019	0%	-	0%	-	0%	-	0%
I2.2a - Value of loans provided to AMCOS under guarantee fund [Billions TZS]	1	2021	0	Target	Actual	Target	Actual	Target	Actual
				-	-	-	-	1	0.9
I2.2b - Value of loans provided to crop traders and processors under guarantee fund [Billions TZS]	0.8	2021	0	Target	Actual	Target	Actual	Target	Actual
				-	-	-	-	0.4	0.8
I2.3a - % of participating traders with access to formal agricultural finance	75%	2017	30%	40%	29%	50%	32%	65%	60%
I2.3b - % of participating small scale agro-processors with access to formal finance by gender	75%	2020	32%	Target	Actual	Target	Actual	Target	Actual
				-	-	-	32%	-	100%
I2.4a - % repayment of revolving loans for agricultural inputs	90%	2018	65%	75%	51%	80%	89%	95%	89%
I2.4b - % repayment rate of loans provided under guarantee fund	95%	2021	Current value	Target	Actual	Target	Actual	Target	Actual
				-	-	-	-	95%	100%
I2.5a - Cost reduction achieved through construction of stone arch bridges	80%	2018	0%	Target	Actual	Target	Actual	Target	Actual
				-	-	80%	80%	80%	80%
I2.5b - % local resource mobilization for construction of bridge infrastructure	20%	2018	0%	Target	Actual	Target	Actual	Target	Actual
				20%	26%	20%	25%	20%	24%

SAKIRP household surveys 2017- 2021 & call-back surveys 2017-2021 & cost monitoring bridges

Indicator	Explanatory comments
12.1a - % of smallholder beneficiaries with access to <u>informal</u> agricultural finance by gender	This indicator captures the proportion of farmers who receive financial services from informal institutions and local arrangements including savings and lending activities and AMCOS input revolving funds. In the absence of formal credit, farmers rely on informal sources of finance.
12.1b - % of smallholder groups with access to agricultural finance	The shift from a focus on groups to AMCOS calls for a revision of this indicator to reflect the new reality.
12.2a - Value of loans provided to AMCOS under guarantee fund [Billions TZS]	The implementation of the co-guarantee facility was successful in encouraging banks to lend to smallholder AMCOS for the purpose of prefinancing crop aggregation. The target of one billion shillings was slightly missed because some AMCOS decided against taking loans to minimize the cost of their aggregation operations.
12.2b - Value of loans provided to crop traders and processors under guarantee fund [Billions TZS]	The total value of loans applied for by SMEs was TZS 420 million but only TZS 140 million was approved for funding. Three out of seven applications were approved. The main reason for the disapproval of the TZS 240 million in loans applied for was the lack of certainty of the end market and final prices obtainable for the commodities involved.
12.3 - % of participating traders with access to agricultural finance	15% of SMEs working with the project benefitted from loans brokered through co-guarantee facility implemented with PASS Trust. The biggest bottleneck to SME financing is the lack of a guaranteed market for their produce.

2.4.2 Progress of main activities

Planned activities ⁹	Progress status			
	A	B	C	D
Improving financial products & services by banks and improving access to finance by VC actors				
Provide and recover in-kind input loans for continual investment		X		
Design and deploy a credit co-guaranteeing facility		X		
Provide technical advice to FSPs in developing and adapting products to meet needs of chain actors.		X		
Promote service linkages between FSPs and chain actors		X		
Direct investments to support value chain development				
Access to markets – construction bridges		X		
Construction and rehabilitation of village commodity aggregation centres			X	

2.4.3 Analysis of progress made

The revolving agricultural input loan fund continues to occupy a central and catalytic role in promoting smallholder farmers' access to agricultural value chain financing. Despite a drop in the repayment levels over the reporting period, the recovery rate is in line with the non-performing loan trends in the country (the ratio of non-performing loans was 8.2% in December 2021, BoT). It is also encouraging to note that the volume of loans from the banking sector has overtaken the size of the revolving input loans. TADB and NMB provided loans to the value of 1.039 billion shillings in comparison to the 726 million in revolving input loans which originated from direct project support. The involvement of Silverlands in the soybean pilot has led to the provision of TZS 14 million in seed loans that will be recovered at the time of harvesting and marketing. The co-guarantee relationship with PASS Trust is now in a second phase of implementation and loans to the value of TZS 3.8 billion have been approved to finance inputs and support stock purchases during the 2021/2022 agricultural season. Overall, the value chain financing situation is improving as loan availability is increasing, and the cost of borrowing is going down (interest rate per annum dropped from 14% in 2020 to 11% in 2021 and CRDB has announced annual interest rates of 9%

⁹ A = The activities are ahead of schedule

B = The activities are on schedule

C = The activities are delayed, corrective measures are required

D = The activities are seriously delayed (more than 6 months). Substantial corrective measures are required

for smallholder cooperatives).

Challenges related to value chain financing

Notwithstanding the progress reported above, some challenges remain within the VC financing space:

- The bank loan application process is lengthy and costly for AMCOS. TADB which is the front-runner in financing smallholder AMCOS has only one office at regional level and smallholder farmers end up making numerous costly trips related to the loan application and approval processes.
- Late disbursement of loan funds, linked to complicated approval processes, leads to low loan utilization which results in high effective cost of borrowing.
- Overreliance on the WFP market for beans has led to delays in selling beans with adverse consequences for AMCOS. Delays in selling commodities increases stockholding costs and forces rescheduling loans
- Side-selling of sunflower grains by farmers frustrated the market linkage relationship with Pyxus as an off-taker. The withdrawal of Pyxus undermined plans to embed seasonal input loan responsibilities within the contract farming model.

Lessons from value chain financing initiatives

The value chain financing arrangements adopted during the reporting period built on the successes of the in-kind input loan model and bring in elements of sustainability by bringing private finance providers. The following lessons emerged from the implementation of the hybrid financing strategies.

- Provision of aggregation financing represents the quickest way of drawing smallholder farmers into collective market arrangements. Availability of working capital at AMCOS level pre-empts side-selling and encourages farmers to aggregate produce as they are assured of immediate payment and financial relief
- The design of agricultural financing mechanisms to farmers must deliberately leverage locally administrative and social structures to create avenues for enforcement in the case of loan defaults. Local government authorities and leaders have been instrumental in enforcing recovery of loans
- For crops, such as sunflower, that have many alternative selling avenues, emphasis must be placed on linking farmers to suppliers of inputs than providing input credit.
- The effectiveness of AMCOS leadership is a pre-requisite for successfully providing and recovering loans to smallholder farmers
- The availability of a definite market for produce constitutes an important and special form of collateral for smallholder farmers
- Any co-guaranteeing arrangements with banks should clearly specify a formula and timeline for reducing the level of guarantee. In the absence of such clarity, banks will have the tendency to maintain a higher level of risk coverage.

Value chain financing sustainability actions

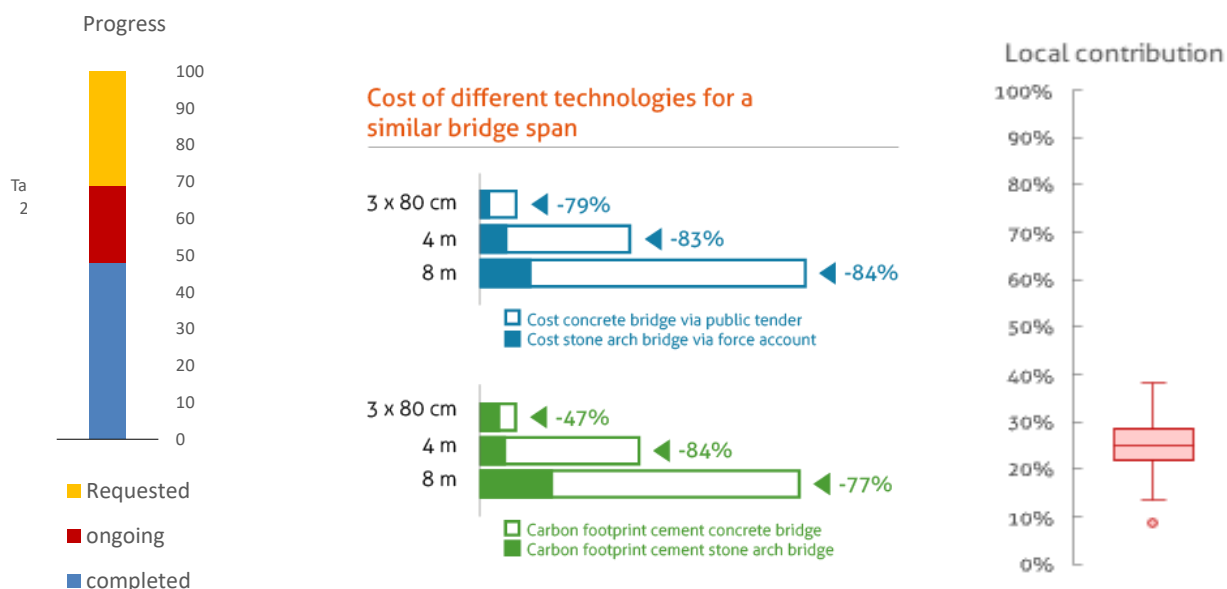
The sustainability of the value chain financing results hinges on the ability of AMCOS to maintain and grow the revolving input loan fund as well as the willingness of mainstream financial institutions to provide additional loan funds for input purchase and prefinancing aggregation. The project's strategy for ensuring such sustainability is implemented through the following actions:

- Agreements governing the in-kind loans have been signed between the project and the AMCOS and these contain guidelines for the management of invested funds. There is a provision for withdrawing funds from non-performing AMCOS
- Following two seasons of accessing loans via the co-guarantee facility, the project will hand over the credit guaranteeing role to PASS Trust on a reduced risk coverage ratio in line with the latter's standard procedures
- As part of the capitalisation process, the project will document the production and credit history of AMCOS and individual farmers for sharing with banks to build their confidence to lend to this group. This will also involve opening the competition to banks that have not yet participated in financing smallholder farmers supported by the project.
- Training and capacity development for cooperative leaders will be intensified with a focus on promoting good financial management practices
- The regional cooperative office will be closely involved in the implementation of sustainability actions so as to equip it to independently assume the oversight role when the project ends

Direct investment in public infrastructure to improve “Access to markets”.

Construction of stone arch bridges

This SAKIRP component “access to markets” has gained a lot of popularity amongst the local government and the regional authorities. The community demand for bridge construction is strong but not always matched by the required local contribution. The stone arch bridges are a heavy-duty technology that rely on local resources, present considerable costs savings (80%) and offer the village governments the opportunity to develop their own road network. Due to the reduced use of industrial building materials and less need for far distance transport, the carbon footprint of stone arch bridges is 80% less than conventional reinforced concrete bridges. In 2021, 26 bridges were completed, raising the total of completed structures to 49. A further 18 have been under construction. More than 40 additional sites have been requested by village governments and surveyed.



Source: enumerator call back survey Feb 2020

Highlights stone arch bridge construction

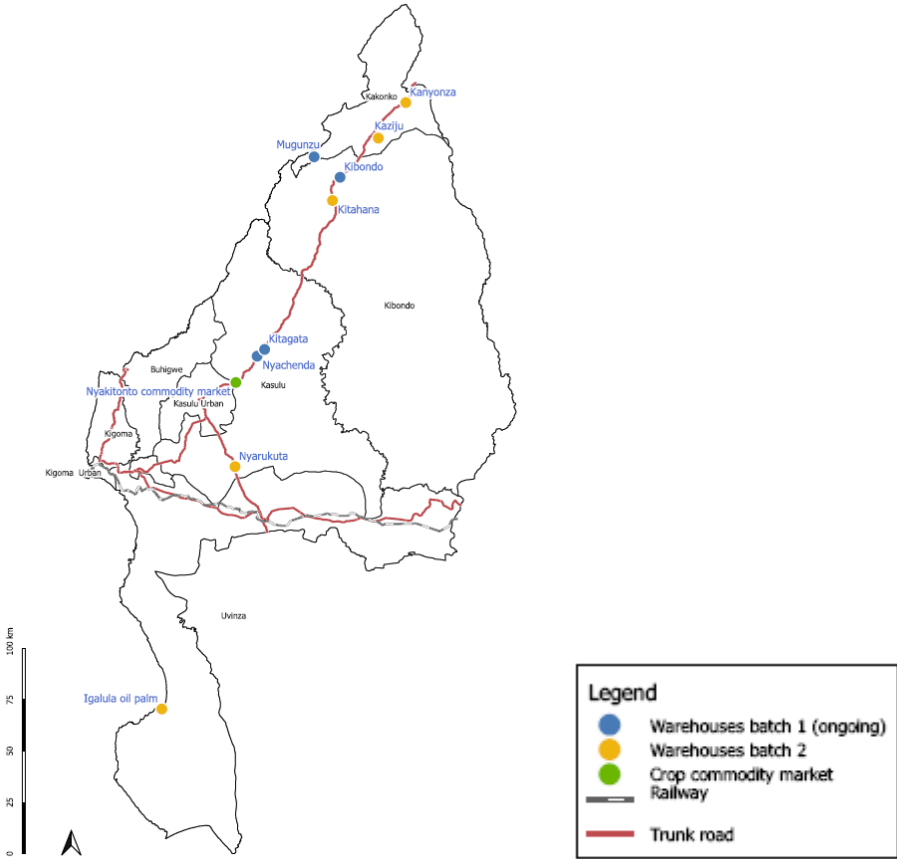
- Reduced construction costs: -80%
- based on a case study analysis:
 - reduction transport cost per 100 kg bag: 50%
 - 170% increase in traffic density
- households reporting to benefit directly from bridge in wards where bridges are constructed: 100%
- households report increased agri-business opportunities (97%) and better transport services (78%) in wards where bridges are constructed
- local resource mobilisation for bridge construction: 20%
- reduced carbon foot print -80%

The collaboration with TARURA is now developed with all 6 districts actively promoting the stone arch bridges, including Buhigwe, Kakonko and Kibondo, which were previously lagging behind. Attention will be given to support the newly appointed TARURA district managers. In the effort to roll out the stone arch technique on national level, TARURA has appointed the former Council Manager of Kigoma rural as the national coordinator for stone arch bridges. He is promoting the technique within Kigoma and other districts across the country. Enabel will include technical support for the TARURA national expert group in the next bilateral program to ensure sustainability. Some masons have performed under the required standards. Two mason trainers have been contracted to establish an experienced mason pool. This helps with implementation of SAKiRP and will be important for the national roll out of the technology. A third-party structural analysis of finalized bridges was carried and provides a scientific background to the standardized design approach for future use by TARURA. The large number of

bridges require a lot of follow-up by the project, but it is a worthwhile investment given the local priority of the roads network, strengthening the nascent TARURA agency and the community mobilisation. During the SAKIRP exit phase, it will be required to reduce the local contribution and focus on own implementation to achieve full budget absorption.

AMCOS warehouses for crop aggregation

Despite the high expectations during the formulation, the construction of warehouses has not taken off as the storage demand is by traders and by not producer groups. In 2020, new implementation modalities were designed focusing on AMCOS that are able to aggregate 60 tons, eligible for bank loans and have participated successfully in crop trading for 2 seasons. These conditions will ensure that the godowns are used after construction. During the SAKIRP exit phase, the construction of 8 godowns of 250 tons is planned. In 2021, a first batch of 4 AMCOS meeting have met the requirements of local contribution and economic eligibility. The government project of classroom construction and price fluctuations due to the effects of COVID-19, has delayed the procurement process of materials and labour. The construction will start early 2022. A further 4 AMCOS are eligible for the second batch for which construction will start in the second quarter of 2022.



Nyakitonto agricultural commodity crop market

Kasulu rural district council has invested in a land development plan of its new headquarters at Nyakitonto. The town plan includes a district hospital, district offices, a retail and a commodity crop market. SAKIRP has been approached by the council to support the market construction. The Nyakitonto crop commodity market is by far the biggest in the region. With the construction of the tarmac trunk road and the town plan, the market will be shifted to a new location that will offer more space and accessibility. The district will provide incentives to the traders (lower crop taxes, land for private investment, security) to encourage the relocation of the commodity trading. The masterplan is in the final stages of approval. Seeing the limited timeframe of SAKIRP, the approach with local sourcing of materials and labour is deemed unrealistic. The alternative proposal is prefabricated steel structures, which reduces the procurement time as well as the workload on the already stretched infrastructure team. A joint committee with traders, district staff, TARURA staff and Enabel staff has been established to coordinate the construction project and prepare for a market governance structure. The Nyakitonto crop commodity market is designed as a multi-donor enterprise. The Enabel supports the first phase of the market with hangars. TARURA will fund the feeder road infrastructure and TANPAK will construct a 1500 T warehouse. The district will look for additional funding to complete phases 2-3.

2.5 Performance output 3: chain supporters render effective services.

The aim of this result area is to mobilize and develop the capacity of private and public value chain service providers to provide effective services to farmers, processors, and traders. Under the category of public service chain supporters, the project is working with agricultural extension and cooperative departments of local government authorities. The project is working with 31 agricultural extension agents who are involved in providing production and agronomic advice to smallholder farmers. District Cooperative Officers have assumed an increasingly important role in building the capacity of nascent AMCOS that have been formed with the support of this project. Under the category of private value chain supporters, the project works with local business development service providers and agribusiness firms who have an interest in buying commodities from smallholder farmers. Close business development services are provided by local-based business development consultants who are known as Farming as a Business (FAAB) coaches. The project has identified, engaged, and trained 10 FAAB coaches who are assigned to support the various smallholder AMCOS. The project also collaborates with public institutions that have the mandate to promote private sector activity in agribusiness, trade and agro processing. Specifically, the project collaborates with the Tanzania Chamber of Commerce, Industry and Agriculture (TCCIA) and the Small Industry Development Organisation (SIDO) in supporting value chain actors involved in crop processing and commercial trading. The trader organisation consisting of SMEs working with the project has been affiliated with TCCIA for the purpose of joint advocacy and ongoing capacity development. TCCIA is leading the effort to register a company which will enable SMEs to trade as a single entity.

2.5.1 Progress of indicators

Result 3: Public and private chain supporters provide functional services to value chains actors											
Indicator	Baseline			2018		2019		2020		2021	
	Endline Target	Baseline Year	Baseline Value	Target	Actual	Target	Actual	Target	Actual	Target	Actual
I3.1 - % of farmers reporting to have received useful government extension services	90%	2017	50%	70%	83%	80%	91%	90%	96%	90%	77%
<i>Male</i>	-	2017	60%	-	81%	-	97%	-	98%	-	76%
<i>Female</i>	-	2017	40%	-	85%	-	87%	-	93%	-	78%
I3.2 - % of farmers reporting to have received useful agronomic support from their lead farmers	90%	2018	74%	75%	74%	80%	94%	85%	87%	90%	82%
<i>Male</i>	-	2018	76%	-	76%	-	94%	-	89%	-	82%
<i>Female</i>	-	2018	72%	-	72%	-	94%	-	84%	-	82%
I3.3 - % of traders satisfied with business development support services	90%	2017	0%	90%	100%	90%	92%	90%	97%	90%	100%
I3.4 - % of farmers in participating wards with access to farming as a business service	80%	2018	0%	20%	24%	25%	19%	30%	36%	40%	43%
<i>Male</i>	-	2018	0%	-	73%	-	23%	-	51%	-	52%
<i>Female</i>	-	2018	0%	-	37%	-	17%	-	26%	-	40%
I3.5 - % of farmers satisfied with the quality of farming as a business service	95%	2020	83%	Target	Actual	Target	Actual	Target	Actual	Target	Actual
				-	-	-	-	80%	83%	80%	90%
<i>Male</i>	-		80%	-	-	-	-	-	80%	-	85%
<i>Female</i>	-		93%	-	-	-	-	-	93%	-	97%

Source: SAKIRP call-back surveys 2017- 2021

2.5.2 Progress of main activities

Planned activities	Progress			
	A	B	C	D
On-the-Job training of Farming as business (FAAB) coaches		X		
Gender mainstreaming based on midterm review recommendations			X	
Refresher trainings local government extension staff		X		
Supervision, on-the-job coaching WAEOs and DFPs – monthly performance reports			X	
Integrated Pest Management for beans - Field training ward extension officers		X		
Post-harvest management - bean quality - field based		X		
Personal demo ward extension officers			X	
Equipping DFPs and ward extension workers with working & transport gear- laptops		X		
Monitoring by Local government & DC of SAKIRP activities		X		
Quarterly Review and planning meetings		X		

NB: Farming as a Business (FAAB) coaching services provided by local-based consultants has been integral to the success of structured production and market access. However, the cost of services provided by these consultants has been fully met by the project. There has been a delay in introducing a cost-sharing arrangement with AMCOS due to the weak financial position of the latter; this delay poses a risk to the sustainable provision of these services after the end of the project.

2.5.3 Analysis of progress made

13.1 - % of farmers reporting to have received useful government extension services	After a continuous improvement of this indicator since the project start, the satisfaction rate dropped from 96% to 77% - but this is still better than the original baseline value of 50%. With the policy change, SAKIRP has focused more on AMCOS/ FAAB coaches and less on farmer extension groups and WAEO monitoring. This drop is a warning sign for the sustainability of quality extension services as the drop is even reported in the consolidated wards. There are considerable differences between districts with Kakonko consistently scoring high 85% and Buhigwe ranking poor 46% reflecting the quality of human resources management and dynamism of AMCOS demanding the services. The frequency of interaction between extension workers and farmers remained the same while the quality dropped. An in-depth analysis is made in the narrative text.
13.2 - % of farmers reporting to have received useful agronomic support from their lead farmers	This indicator dropped as well from 87% to 82%. The reasons are the same as mentioned above.
13.3 - % of traders satisfied with business development support services	This indicator has constantly remained high due to the strong follow-up by the SAKIRP technical team which provides strategic and operational support to SMEs who constitute the Business Membership Organisation.
13.4: % of farmers in participating wards with access to farming as a business service	The indicator increased from 36 to 43% due to the increase of AMCOS and consolidation of wards. The modest increase reflects the need of stricter AMCOS selection of serious farmers that are able to respect contract and loan agreements.
13.5: % of farmers satisfied with the quality of farming as a business service	The FAAB satisfaction rate has constantly improved to 90% - better than the WAEO appreciation by farmers. Again, this reflects the shift in the SAKIRP approach to the provision of intensive support to AMCOS.
Gender	Gender disparities in the indicators can be found. Less women have access to farming as a business services than men because AMCOS female membership is only about 38%. This is consistent with the female farmer participation rate in structured market arrangements. However, women having access to FAAB coach service the satisfaction rate is higher 97% because FAAB coaches focus a lot on quality control of processing that is generally done by female farmers. It also reflects the education gap.

Strengthening local business development services - FAAB coaches

The number of FAAB coaches during the year under review reached a peak of 11 as the demand for services grew in response to the expansion in structured production and marketing arrangements. Multi-pronged efforts were made to improve FAAB coaches' technical knowledge and service provision capabilities. Through collaborations with PASS Trust and TADB, FAAB coaches were oriented and coached on value chain financing processes. The coaches were primarily responsible for coordinating loan application and management at the level of AMCOS. Additional training was provided on crop aggregation and storage management resulting in improved management of structured marketing activities by smallholder AMCOS.

Figure 10: % farmers in participating wards with access to FAAB services

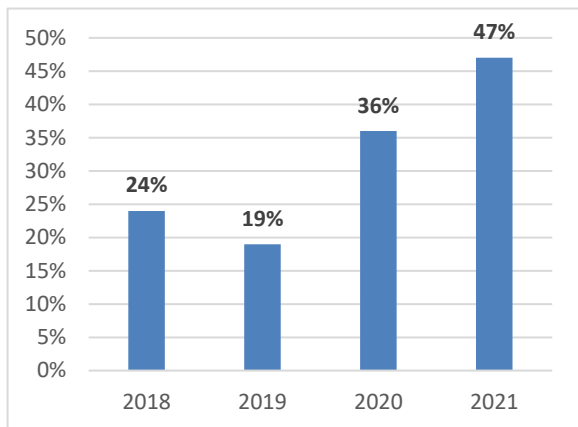


Figure 11: % farmers satisfied with the quality of FAAB services

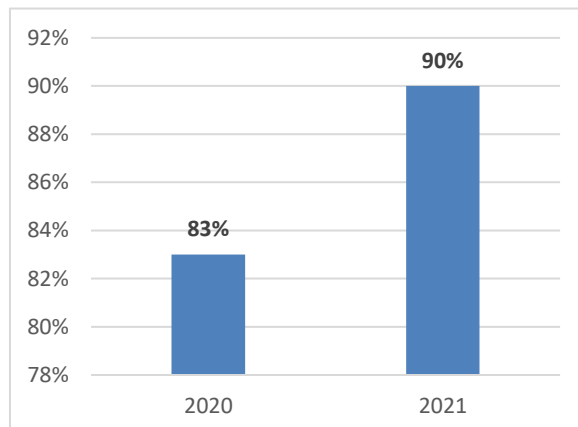


Figure 12: Access to FAAB services by district

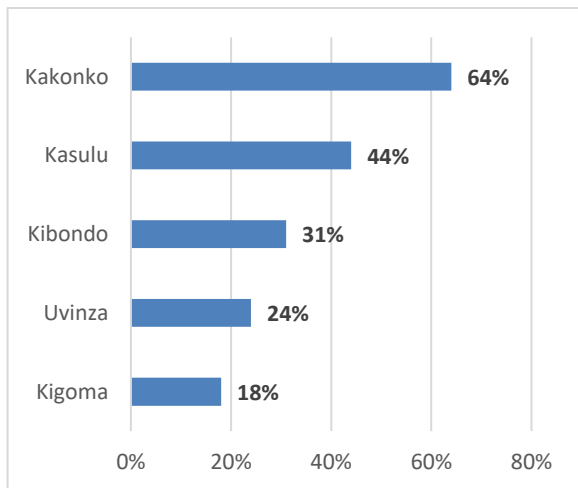
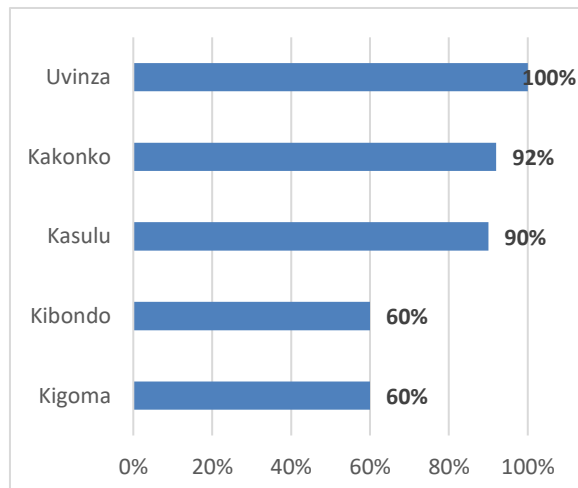


Figure 13: % farmers satisfied with quality of FAAB services by district



Source: Call-back survey 2021

Sustaining the provision of farming as a business coaching

The plan to introduce FAAB cost-sharing arrangements between the project and AMCOS could not be rolled out in 2021. This was mainly due to the weak financial position of most of the AMCOS; the AMCOS have not yet accumulated sufficient reserves to meet their management overhead costs. A survey which was conducted to gauge AMCOS organisations' readiness to contribute to the cost of FAAB coaches showed a general willingness to pay though the ability to make meaningful payments is still low. Alongside the option of getting AMCOS to assume the responsibility to meet FAAB coaching costs, the project sensitised the collective of FAAB coaches on the importance of creating a business entity. Efforts to register a company to continue providing FAAB coaching services are in progress.

Local government extension services

The extension services provided through the local government remains an important SAKIRP implementation support. In 2021, SAKIRP covered 34 wards (down from 52 in 2018), which is about 33% of the rural wards in Kigoma region. The project has continued to maintain support in terms of providing a motorcycle, smart phone for mobile data collection, fuel and communication allowance. SAKIRP provides 70% of the functional motorcycles for agricultural extension in the intervention zone and 100% of the smart phones. On average, an extension worker is coaching 8 farmers groups and 200 farmers. There are 5 (15%) female WAEOs out of a total of 34.

The local government extension service, as main service provider for better production remains the critical bottleneck to the improvement of smallholders' income. Smallholder beneficiaries reporting to have received useful extension services decreased from 96% in 2020 to 77% in 2021, The beneficiaries' appreciation of WAEOs services is much better than the technical review given the different assessment standards. This discrepancy indicates the low level of extension service provision without external support.

The extension workers' performance was evaluated on a monthly basis and reported to the DAICO. Factors contributing to the success of LGA agricultural extension

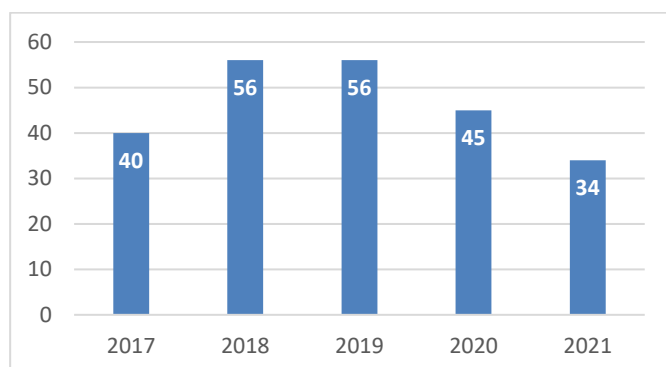
1. Personal commitment and professional ethics of the agricultural extension officer.
2. Good communication between WAEO and community and setting a personal example through enthusiastic hands-on demonstration.
3. Regular on the job supervision and coaching by the direct supervisor.
4. Effective human resource management of the DAICO's office / DED.
5. Well organised producer groups demanding quality extension services from WAEO
6. Profitable agricultural value chains that generate household income
7. Facilitation of extension officers with transport and communication.

The overall performance of WAEOs requires a lot of incentivization to achieve results. Similar partnerships in the future should consider a rigorous selection process to obtain ideal WAEO's who are motivated. The wards that seem to be potential in the future, the districts can arrange how to use crop cess for the incentivization in fuel for better results achievement.

Consolidating the geographical areas

With the project, consolidating its strategy to a more AMCOS-centric one, it has been necessary to drop any wards that have no AMCOS and consequently, no structured production activities. During the reporting period, 11 wards dropped because from 2020 of the unsatisfactory performance from extension services and or lack of AMCOS for consolidation strategy.

Figure 14: SAKIRP supported wards in Kigoma region



The above graph shows wards under the SAKIRP project. The project target of reaching 20,000 beneficiaries (prior to MTR recommendation to concentrate on quality over quantity), number of wards rose to 56 in 2018. It remained at 56 in 2019, but in 2020, the project began consolidating and preference was for quality after the MTR recommendations, therefore the project moved forward with 45 wards. In the reporting period a further 11 wards have been dropped in 2021 to make 34 wards equivalent to 33% of the rural wards in the region which are under project support.

Expanding to more wards has challenges: overlap with other projects and in many remaining wards there is often no extension worker that can meaningfully absorb the assistance provide by a development project. The female WAEOs reduced to 5 in 2021 from 9 in 2020 which accounts (16%) in total, the percentage remain the same due to the number of wards dropped from the project support.

Differences in quality-of-service provision between the districts in Kigoma region

Figure 15: Average number of touchpoints with extension workers/year

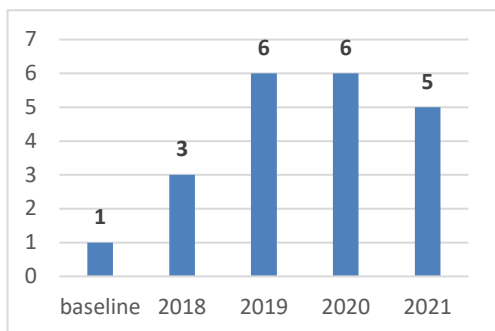


Figure 16: % smallholder beneficiaries receiving useful extension services

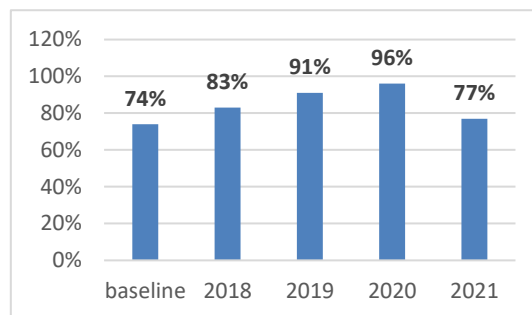


Figure 17: Average extension touchpoints per district

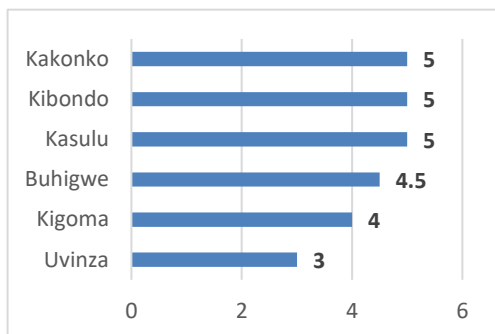
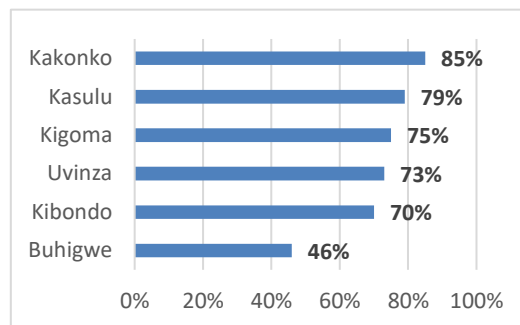
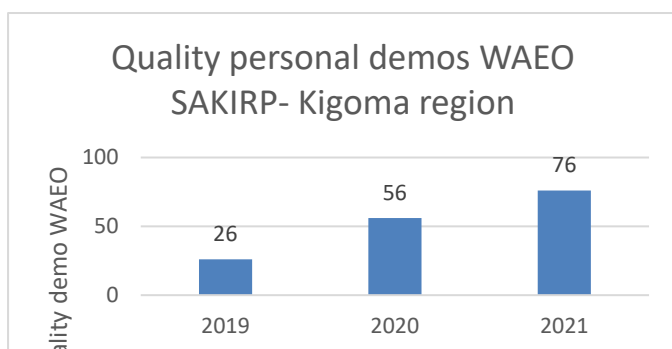


Figure 18: Receiving useful extension services by district



WAEO own personal demo plots

The quality of the personal demonstration plots serves as a proxy WAEO performance indicator. With the consolidation of wards and better WAEO selection the number of quality demos increased significantly. This indicates that a large number of WAEOs not motivated even with improved working facilities.



Source: SAKIRP M&E 2021

Overall extension performance

Challenges that remain under this result area include the following:

- Lack of effective demand for agribusiness development services. This discourages experienced service providers from locating in Kigoma region.
- Limited local government budgets impact on provision of services as mobility is limited. Crop cess is not reinvested in agricultural extension. It is unlikely that the WAEO facilitation in transport and communication will continue beyond the SAKIRP lifespan.
- Inadequate commitment from some of the extension workers as the service provider.
- Limited human resources are available at the district agricultural departments. The majority of districts is headed by an acting DAICO and staffs have to combine several functions to deal with the workload and on the job backstopping of WAEOs. Some agricultural extension officers double as ward executive officers. The quality of district reporting needs improvement.
- The quality of the services rendered by consultants needs constant supervision.

2.6 Performance output 4: smallholder farmers & production strengthened.

2.6.1 Progress of indicators

Result 4: Public and private chain supporters provide functional services to value chains actors											
Indicator	Baseline			2018		2019		2020		2021	
I4.2a - % adoption of cassava improved technologies and GAP by smallholder beneficiaries	40%	2017	10%	Target	Actual	Target	Actual	Target	Actual	Target	Actual
				12%	13%	15%	23%	20%	30%	28%	42%
	Male	-	2017	-	-	15%	-	24%	-	33%	-
Female	-	2017	-	-	12%	-	21%	-	27%	-	
I4.2b - % adoption of beans improved technologies and GAP by smallholder beneficiaries	60%	2017	18%	Target	Actual	Target	Actual	Target	Actual	Target	Actual
				30%	29%	40%	35%	50%	44%	55%	54%
	Male	-	2017	-	-	34%	-	40%	-	50%	-
Female	-	2017	-	-	22%	-	31%	-	39%	-	
I4.2c - % adoption of sunflower improved technologies and GAP by smallholder beneficiaries	40%	2019	19%	Target	Actual	Target	Actual	Target	Actual	Target	Actual
				-	-	-	19%	20%	-	28%	82%
	Male	-	2019	23%	-	-	-	23%	-	-	-
Female	-	2019	15%	-	-	-	15%	-	-	-	95%
I4.3a - Yield of cassava [MT/Ha]	4	2017	2.9	Target	Actual	Target	Actual	Target	Actual	Target	Actual
				3.0	3.1	3.2	3.4	3.5	3.6	3.8	4.1
	Male	-	2017	3.3	-	3.5	-	3.7	-	3.8	-
Female	-	2017	2.6	-	2.9	-	3.2	-	3.5	-	3.9
I4.3b - Yield of beans [kg/ha]	700	2017	440	Target	Actual	Target	Actual	Target	Actual	Target	Actual
				500	570	575	542	635	536	675	528
	Male	-	2017	411	-	568	-	573	-	560	-
Female	-	2017	469	-	588	-	511	-	513	-	473
SPM		2019	533	-	-	-	533	-	545	-	638
SPM Male		2019	558	-	-	-	558	-	613	-	723
SPM Female		2019	504	-	-	-	504	-	473	-	533
				Target	Actual	Target	Actual	Target	Actual	Target	Actual
I4.3c - Yield of sunflower [kg/ha]	800	2019	523	-	-	-	523	600	588	750	747
Male	-	2019	555	-	-	-	555	-	655	-	820
Female	-	2019	488	-	-	-	488	-	413	-	616
SPM	-	2021	721	-	-	-	-	-	-	-	721
SPM Male	-	2021	792	-	-	-	-	-	-	-	792
SPM Female	-	2021	632	-	-	-	-	-	-	-	632
I4.4a - % of smallholder beneficiaries engaging in collective marketing of cassava	8%	2017	8%	Target	Actual	Target	Actual	Target	Actual	Target	Actual
				10%	10%	15%	5%	25%	6%	25%	12%
	Male	-	2017	8%	-	12%	-	5%	-	8%	-
Female	-	2017	8%	-	8%	-	4%	-	4%	-	10%
I4.4b - % of smallholder beneficiaries engaging in collective marketing of beans	25%	2017	5%	Target	Actual	Target	Actual	Target	Actual	Target	Actual
				5%	10%	10%	6%	15%	21%	20%	14%
	Male	-		3%	-	12%	-	8%	-	23%	-
Female	-	2017	6%	-	8%	-	5%	-	19	-	12%
SPM	-	2019	88%	-	-	-	88%	-	100%	-	86%
SPM Male	-	2019	88%	-	-	-	88%	-	100%	-	86%
SPM Female	-	2019	88%	-	-	-	88%	-	100%	-	85%
I4.4c - % of				Target	Actual	Target	Actual	Target	Actual	Target	Actual

Result 4: Public and private chain supporters provide functional services to value chains actors											
Indicator	Baseline		2018		2019		2020		2021		
smallholder beneficiaries engaging in collective marketing of sunflower	15%	2019	1%	-	-	-	1%	2%	36%	5%	40%
<i>Male</i>	-	2019	2%	-	-	-	2%	-	30%	-	38%
<i>Female</i>	-	2019	0%	-	-	-	0%	-	62%	-	43%
I4.5 - % of sunflower farmers adding value through processing	60%	2019	51%	Target	Actual	Target	Actual	Target	Actual	Target	Actual
				-	-	-	51%	-	70%	-	35% ¹⁰
<i>Male</i>	-	2019	58%	-	-	-	58%	-	77%	-	37%
<i>Female</i>	-	2019	40%	-	-	-	40%	-	52%	-	31%
I4.6 - % of farmer groups transitioned to professional organizations				Target	Actual	Target	Actual	Target	Actual	Target	Actual
	50%	2018	12	15%	13%	20%	22%	25%	34%	25%	49%
SPM	-	2020	63%	-	-	-	-	-	63%	-	69%
I4.7 - Number of producers involved in contract farming	2 000	2017	123	Target	Actual	Target	Actual	Target	Actual	Target	Actual
				250	558	500	457	750	993	1 100	1 620

2.6.2 Progress of main activities

Progress of main activities	Progress:			
	A	B	C	D
Empowering farmers through farmer business schools		X		
Capacity assessment of farmers' organisations CPI tool		X		
Capacity building of agricultural marketing cooperatives - AMCOS		X		
Through clusters of farmer groups, facilitate collective action regarding producer			X	
Supporting farmers' organisations for improved integration and empowerment in		X		
Coach and guide AMCOS on group marketing and sustainable trade relationship	X			
Organize market linkage meeting between group leaders and traders/aggregators	X			
Lead farmers: capacity building/ motivation and outreach			X	
Facilitate adoption Savings & Credits schemes non VICOBA groups			X	
Improved cassava, sunflower & bean productivity and production to		X		
Train and coach farmers on improved agronomic practices		X		
Facilitate participatory screening of improved cassava varieties		X		
Support commercial & community multiplication of disease tolerant cassava		X		
Establishment of cassava phytosanitary pilots in 6 villages		X		
Facilitate participatory & market driven screening of new bean varieties		X		
Soil analysis and fertilisation recommendations			X	
Post-harvest conservation beans: test & demonstrate technology options –		X		
Scaling up of sunflower production	X			
Pilot soybean production and variety demos in 2 districts		X		
On farm demos/ field days / exchange visits		X		

¹⁰ Data from structured marketing suggests this is as high as 70%, but survey respondents under-report due to contractual agreements signed regarding side-selling

2.6.3 Analysis of progress made

Indicator	Progress
I4.2a - % adoption of cassava improved GAP by smallholder beneficiaries	GAP adoption in cassava reached 42% (up from 10% baseline) mainly through improved varieties (30%), correct spacing (84%) and uprooting diseased cuttings. GAP adoption by non-beneficiaries is 33%. Cassava has the lowest adoption rate due to low prices and the highly informal character of the value chain.
Indicator	Progress
I4.2b - % adoption of beans improved GAP by smallholder beneficiaries	GAP adoption in beans achieved 54% and exceeded the annual target mainly through correct spacing and fertilizer use. Input revolving funds set up with the help of SAKIRP made the difference for fertilizer and variety adoption. Pesticide use only increased slightly.
I4.2c - % adoption of sunflower improved GAP by smallholder beneficiaries	With 82 % sunflower has the biggest GAP adoption rate. Explaining factors are: the new crop is promoted as a package in Kigoma, in kind credit was made available for hybrid seed and fertilizer by SAKIRP and the private sector contributed 4 extension workers.
I4.3a - Yield dried cassava [T/ha]	Dried cassava yields increased to 4.1 ton/ha an increase of 14% compared to 2020 and 41% of the baseline. The abundant rain and the consolidation of production of committed cassava farmers due to low prices are the reasons for the yield increase.
I4.3b - Yield of beans [Kg/ha]	Bean yield slightly dropped from 536 to 528 kg/ha due to heavy rainfall in 2021. There was no yield difference for the SPM/ AMCOS sub-group. Beans are a crop that is particularly sensitive to changing weather patterns and this can be seen as well in the continuous declining bean yields over the last 2 years with more intensive rainfall.
I4.3c - Yield of sunflower [Kg/ha]	Sunflower yields achieved the annual target of 749 kg/ton. Good yields were obtained due to the use of the hybrid variety supersun 66. SPM farmers had lower yields of 721 kg/ha. Seed delivery to AMCOS was late due to the delayed TOSCI certification of the hybrid supersun 66. The dry spell during the planting time affected the yield and some farmers could only plant in March.
I4.4a - % of smallholder beneficiaries engaging in collective marketing of cassava	This cassava indicator only marginally increased to 12% - still far off the target of 25%. The informal character of the cassava trading does not allow credit facilitation that would be the inducement for collective marketing
I4.4b: % of smallholder beneficiaries engaging in collective marketing of beans	The collective SPM bean marketing indicator remained more or less constant at 86%. The collective bean marketing for non-SPM farmers dropped from 21% to 14% due to the individual delivery to AMCOS as non-members.
I4.4c: % of smallholder beneficiaries engaging in collective marketing of sunflower	This indicator increased to 40% from a baseline value of 1%. The contract farming with Pyxus was the basis for collective sunflower marketing. However due to late adjustments to the market dynamics and heavy side-selling, the structured partnership between AMCOS and Pyxus will be discontinued in the next season.
I4.6 % of farmer groups transitioning into professional organizations	This indicator rose to 49% and exceeds the target of 30%. Groups participating in SPM have a much better CPI score than non-participating groups: The hands-on aggregation and credit management are the best capacity building exercise.
I4.7 Number of producers involved in contract farming	The number rose to 1620 farmers from 123 baseline value. This was achieved through continued AMCOS support, FAAB coaches, revolving funds, market linkage with Pyxus and WFP.
Gender	The indicators for female farmers followed the same overall positive trend as for male farmers. However, the gender discrepancy remained. Women's yields were on average 21% lower. This is attributed to less access to credits, agro-inputs and fertile land.

Capacity strengthening of producer groups - indicator I4.6 and I4.7

Annually Capacity Performance Indices (CPI) of producer groups have been assessed, to evaluate progress of their capacity. The CPI tool is based on the following 8 key indicators: accountability, professional capacity, income diversity, strategic potential, production management, marketing, participation and advocacy. In 2021, 228 groups have been evaluated. The decision to focus on wards with more potential has had a positive impact on farmer groups CPI scores, with 49% of farmer groups classified as professional organisations. This is a significant increase from 34% in 2020 and 12% at baseline value. A significant proportion of farmer groups are still weak, with 39% having a CPI score of less than 60% (compared to 55% in 2020).

The first AMCOS level CPI assessment was carried out for 2021. The results show that 66% of AMCOS are classified as professional organisations. Although the AMCOS category has the highest percentage classified as professional organisations compared to farmer groups, it shows there is still a lot of work to be done in terms of capacity building of AMCOS. 21% of AMCOS are classified as unprofessional i.e CPI < 60%.

Figure 19: Farmer groups transitioning to professional organisations

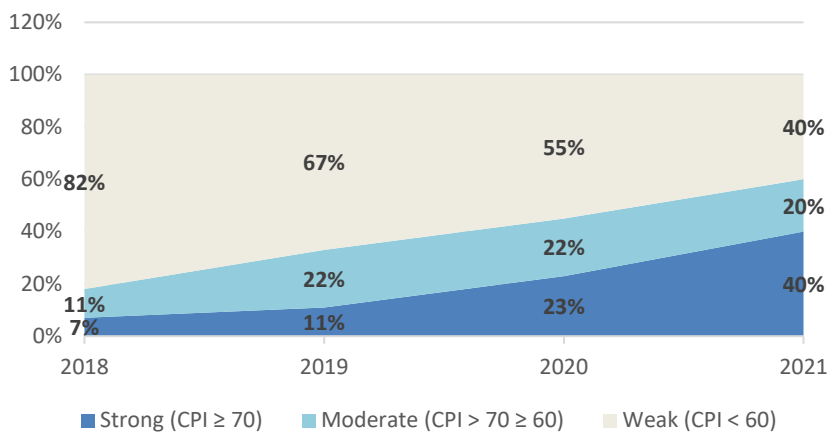
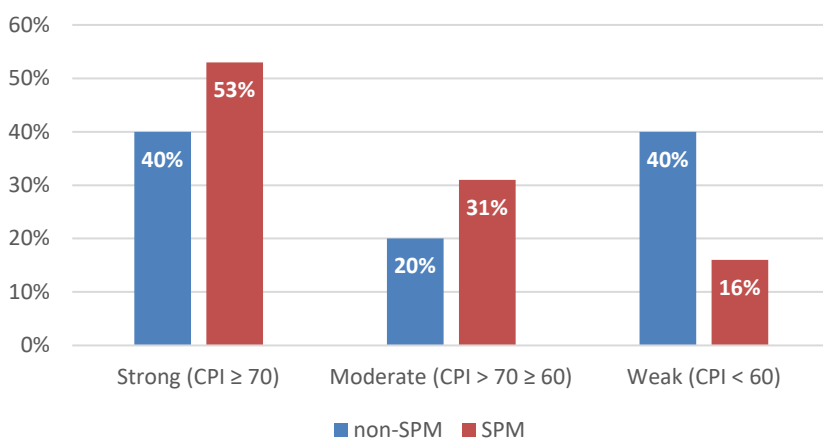


Figure 20: CPI 2021 scores non-SPM vs SPM



Source: CPI Survey 2021

The mid-term review recommended to focus on quality rather than quantity for the capacity building of producers' organisations. SAKIRP focus shifted to facilitate a limited number of more performant farmers groups to set an example for others. SAKIRP has also aligned with the government policy of promoting Agricultural Marketing Cooperative Societies (AMCOS). The project has been supporting 19 AMCOS with 2160 members. In addition, there are 13 pre-AMCOS in different stages of capacity building and formal registration at their own pace and discretion. Some pre-AMCOS are twinned with better-established AMCOS for developing the above criteria. 22 wards with 169 groups where farmers have not been able to organize in a pre-AMCOS have been dropped.

The table below shows the AMCOS capacity building provided by SAKIRP:

Table: Overview of capacity building support for AMCOS

SAKIRP support	Remarks
AMCOS management	Farming as a business coach assist with membership management, record keeping and meeting the quality requirements of buyers.
	Pre-screening farmers for credit preparedness and production capacity
	Encourage AMCOS to grow their membership basis to be ward service centres.
	Backstopping by district and regional cooperative officer
	Twinning (pre) AMCOS for capacity building and economies of scale
	Post-harvest handling and aggregation training
Financial linkages	TADB loan facilitation through “collateral managers” and co-guarantee fund, total of Tsh 899.75 mil was accessed by AMCOS and 568.2 mil. utilised
	PASS agreement for financial management training and bankable business plans.
Market linkages	WFP bean supply to refugee camps – 1300 tons
	Red kidney export markets with Silverlands -48 tons
	Sunflower aggregation for Pyxus in Dodoma - 311 tons
Input revolving fund	895 million Tsh invested in input revolving fund with 15% local contribution
	Default rates of AMCOS revolving funds <5%
	Bulk input purchases: fertilizer 250 tons, bean seed 77 T, sunflower seed 6 tons.
	Growing the input revolving fund by increasing member capital contributions.
Construction godowns to boost aggregation & trade	AMCOS need to meet strict eligibility aggregation & local contribution criteria to make sure warehouses will remain functional
	4 godowns under construction – 5 more planned 2022
	Equipment: weighing scales, sieving tables, pallets, moisture meters, tarpaulins
Local resource mobilisation	Mobilisation of shareholder capital and entry fees All AMCOS support requires local contribution.

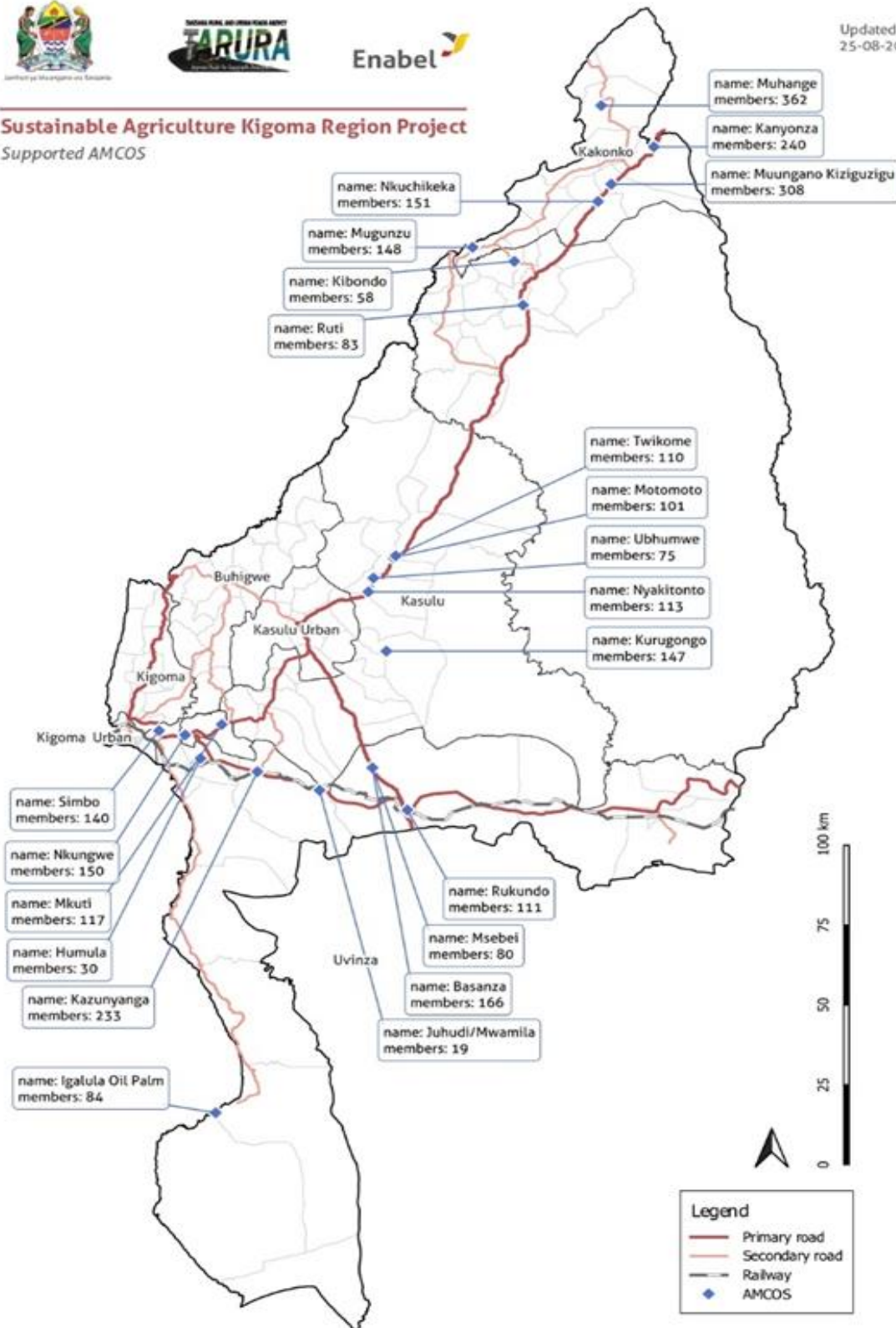
Summary table of beneficiary AMCOS supported in 2021

District	AMCOS	# Members	Revolving Fund	TADB loan received	Aggregated Sunflower (tons)	Aggregated Beans (tons)	FAAB Coach support	Godown constr.
Uvinza	Mwanyaka						Yes	
Kakonko	Kanyonza	240	32.8 mil	129.1 mil	4	97	Yes	2022
	Mugunzu	148	17.8 mil	None	36	-	Yes	2021
	Muhange	362	30.2 mil	135.8 mil	6	107	Yes	-
	Muongano	308	94.7 mil	None	23	374	Yes	-
	Nkuchikeka	151	62.5 mil	None	21	181	Yes	-
	Kaziju	110	3.2 mil	None		=	Yes	2022
Kasulu	Kurugongo	147	28.5 mil	None	5	22	Yes	-
	Motomoto	101	41.8 mil	None	37	-	Yes	-
	Nyakitonto	113	98.7 mil	100. mil	5	150	Yes	-
	Twikome	110	83.1 mil	94.8 mil	41	143	Yes	2021
	Ubhumwe	75	22.4 mil	None	24	45	Yes	2021
	Nyamuki	49	11.2 mil	None	12	-	Yes	-
Kibondo	Kibondo	58	4.7 mil	None	7	195	Yes	2021
	Ruti	83	6.4 mil	108.4 mil	30	107	Yes	-
	Kitahana	50	9.2 mil	Non	-	-	Yes	2022
Kigoma	Mkuti	117	5.7 mil	None	5	-	Yes	-
	Nkungwe	150	4.4 mil	None	5	-	Yes	-
	Simbo	140	8.2 mil	None	7	-	Yes	-



Updated on:
25-08-2021

Sustainable Agriculture Kigoma Region Project Supported AMCOS

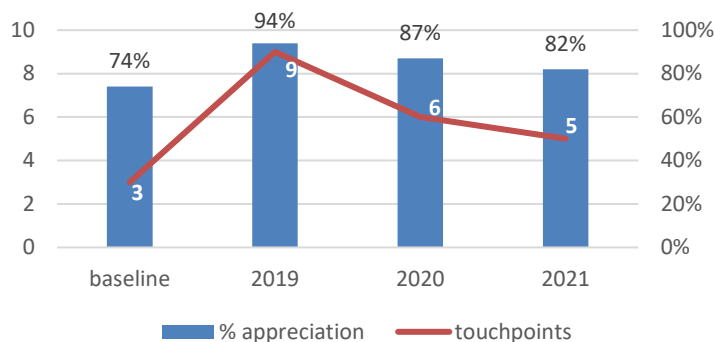


Lead farmers – grassroots facilitators to complement local government extension

Groups selected lead farmers (LF) according to a set of criteria who collaborate with WAEOs. Lead farmers help on a voluntary basis with the group management, the logistics, record keeping, farm demo management, group farming activities and recommendations for the best agronomic practices. 47 LFs are working with their groups; 41% are female. Lead farmers are monitored by the groups and WAEOs. The best performing lead farmers were co-opted in the production and aggregation committees of the AMCOS. For extension groups not directly affiliated to AMCOS, the concept of lead farmer is generally in decline as the supervision of wards not retained by SAKIRP has reduced.

The appreciation of the beneficiaries of the services of the lead farmers has improved from 74% in 2017 to 87% in 2020 but fell slightly to 82% in 2021 between the districts. The average number of services received per year increased from 3 in 2018 to 5 in 2021.

Figure 21: Appreciation for agronomic support from lead farmers



Source: Call-back Surveys 2018-2021

Cassava production and income

With the continuation of unstable cassava prices, 2021 season has seen a decrease in production compared to 2020 season. Nevertheless, production remains substantial given the demand in Burundi and its ease of cultivation. The key strategies to increase to increase cassava productivity are: improve farmers' access to double tolerant improved varieties, Chereko & T130 and establish phyto-sanitary pilots in each district.

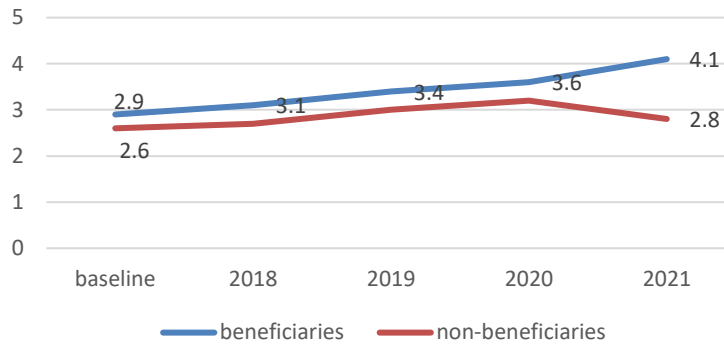
Cassava yields production – indicator I4.1a & I4.3a

Productivity of cassava cultivation is reported to have increased steadily over the past years. The average reported yield is 4.1 t/ha dry chips/ ha and increase of 95% of the 2017 baseline (see graphs below). However, this yield is still short of the potential yields of 8 tons/ha. Cassava yields in Kibondo, Kasulu and the southern wards of Uvinza district are higher. In these areas virgin land is cultivated for cassava production (see map below). The steady increase in cassava yields is also reflected in total production. This increase is attributable to the following factors:

- a spill-over of the project's efforts of promoting disease tolerant varieties especially during the last years when the variety TZ 130 has become more available (see difference with yields of non-beneficiaries)
- many farmers stopped marketing cassava, with as of today only **53%** of beneficiaries generating income from cassava, compared to **79%** at baseline level (2017). This occurrence could be a contributing factor to the observed trend of production and productivity increase, as only the most successful cassava producers continued.
- High rainfall in 2021 contributed to the good yields.

Source: HH Surveys 2017-2021

Figure 22: Trends in cassava yields (MT/ha)



Source: HH Survey 2021

Improved technology adoption indicator I4.2a

The observed increase in productivity is further reflected in the adoption of improved technologies and GAP practices, with as of today an overall adoption level of 42% beneficiaries / 33% non-beneficiaries - compared to 10% at baseline level. Especially the adoption of improved varieties, destroying diseased planting material and correct spacing increased significantly. The use of fertilizer in cassava is negligible as it serves as a low investment crop in the farming system.

Figure 23: Cassava GAP adoption trends

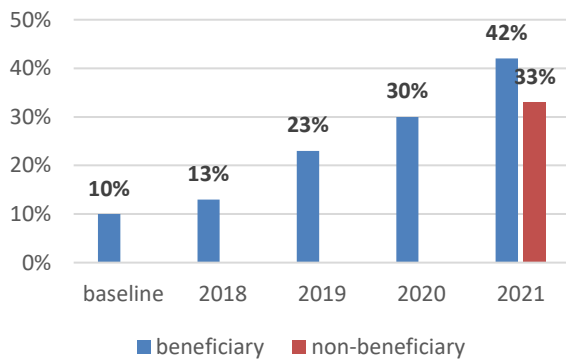
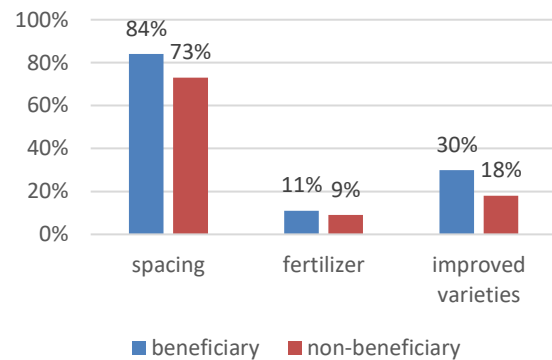


Figure 24: Current levels of adoption (2021)



Source: Beneficiary Tracking 2017-2021 + HH Surveys 2017-2021

Availability and adoption of cassava improved varieties indicator I4.2a

Currently 67% of beneficiary farmers are reporting to have access to improved varieties, compared to merely 13% at baseline level. Over one-third (36%) of beneficiaries is also cultivating improved varieties. Interestingly enough, similar findings were observed for non-beneficiaries, increasing upward trends in both improved variety availability and adoption, although with noticeably diverging rates between beneficiaries and non-beneficiaries. This can be attributable to a spill over of the project's efforts of promoting improved varieties.

The varieties with the best disease tolerance for Kigoma - Tz130 and Chereko - are fast multiplied in micro propagation units.

Figure 25: Adoption of improved cassava varieties

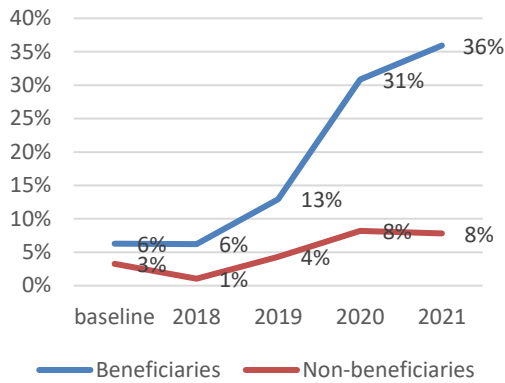
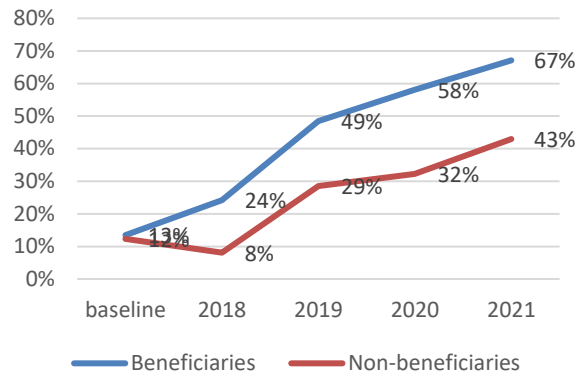


Figure 26: Availability of improved cassava varieties



Source: HH Surveys 2017-2021

Multiplication of disease tolerant cassava varieties

Due to germplasm scarcity of double tolerant cassava varieties such as Tz 130 and chereko and prohibitive transport costs of bulky cassava cuttings, SAKiRP project opted to facilitate rapid multiplication of the varieties sourced from TARI Maruku. There are now nurseries of potential entrepreneur farmers and government institutions in Kigoma Region that will cut supply cost considerably and maintain quality. Using this approach together with multiplication at farmer groups level, the cost of getting the planting material has decreased from 65Tsh/cutting in 2019 to 35Tsh/cutting 2021. Now cuttings can be sourced within the region.

Table: Overview cassava multiplication centres	
Potential farmer/Institute	# Cuttings Production 2021
Shabani Musa	3,246,000
Jembe Gr -Kibondo	318,000
George Abbas	351,000
MATI-Mubondo	78,000
EM Uvinza	531,000
Leonard Mahanga	329,000
Tumaini Gr Kigoma	134,000
Total	4,987,000

District	Cuttings delivered			Total/district	Total cuttings multiplied	Projected Acres 2021
	2018	2019	2020			
Kakonko	195,200	167,000	279,000	641,200	4,488,400	1,122
Kibondo	146,400	173,500	239,000	558,900	3,912,300	978
Kasulu	184,000	171,000	255,000	610,000	4,270,000	1,068
Buhigwe	203,200	125,500	81,000	409,700	2,867,900	717
Kigoma	124,800	196,500	172,000	493,300	3,453,100	863
Uvinza	181,600	109,000	124,000	414,600	2,902,200	726
Total	1,035,200	942,500	1,150,000	3,127,700	21,893,900	5,473

Cumulatively, a total of 3,127,700 improved varieties of cassava cuttings were supplied to farmer groups from 2018 to 2020 for multiplication, these will yield a total of 21,823,900 cuttings with assumption that 70% of the material planted and performed. It is anticipated that these will result to planting on average a total of 5,500 acres in 2021 season regionally.

Phytosanitary pilot to reduce the spread of CMV and CBSV

Sustainability of cassava improved varieties depends on protection of the varieties against susceptible local varieties, usually by reducing disease pressure. A phytosanitary approach is being piloted in one village per district. In the pilot villages, bylaws control susceptible varieties by replacing them with improved varieties and the systematic uprooting of infected cuttings. The WAEO has a systematic follow-up and SAKIRP provides the initial double tolerant varieties for the local production of cuttings. For initial phase of implementation, a total 490 Ha of improved varieties, Chereko and T 130 were covered. Village bylaws are under final stages for endorsement by District Lawyer but implementation of the laws is already adhered to in respective villages

Planned dried cassava aggregation

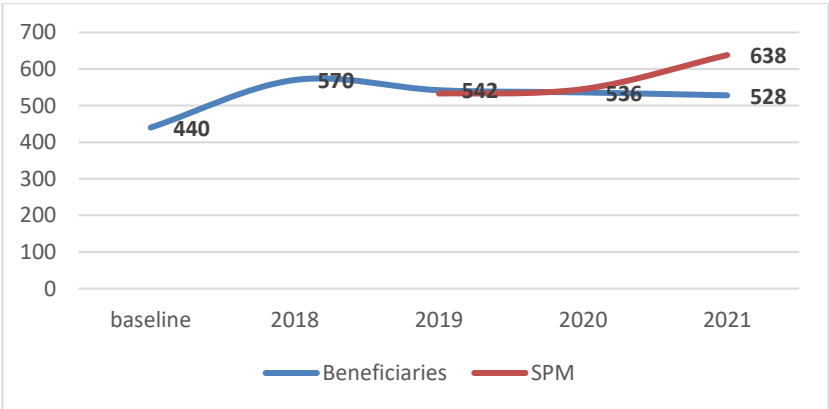
Success in bean SPM has unlocked the barriers for AMCOS to meet required quantities of produce by off-takers which, in turn, has enabled access to aggregation credit through TADB financing. This has created opportunities for the aggregation and sale of other commodities like cassava. The project intends to facilitate AMCOS to start aggregation of dried cassava in the 2022 season with the linkage of prevailing markets in Rwanda. It also provides an opportunity for temporal arbitrage of cassava by the AMCOS, opening them up to better prices

Bean production and income

Production and yield of beans- indicator I4.3 b

Despite the recently climate change and weather uncertainties; over the past 3 years, bean production in Kigoma Region continued to increase, as reported by 54% of beneficiaries and up to 69%% of beneficiaries under structured marketing. Generally, average yields have improved from 440 kg/ha (2017) to an average yield of 528 kg/ha for beneficiaries and 638 kg/ha comparable average yield achieved under structured marketing in 2021 from 542kg/ha reported in 2019 The yield increase is attributed both to the increased adoption of improved bean varieties and good agricultural practices. Bean yields in Kakonko, Kibondo and Kasulu are systematically better than other districts due to early rains, midlevel altitude and committed extension support.

Figure 27: Bean yield in kg/ha

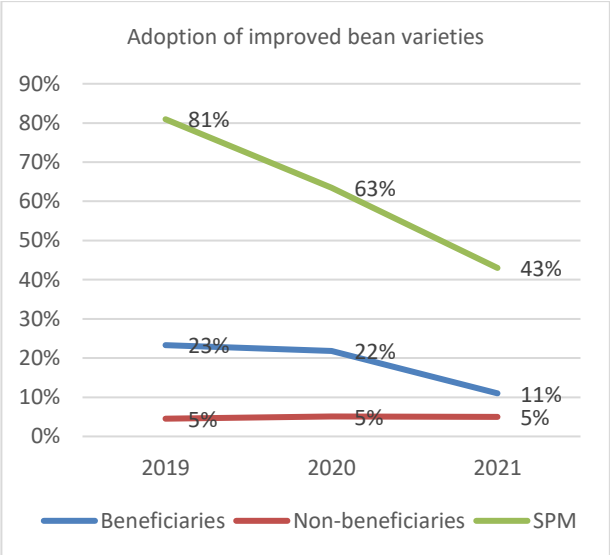
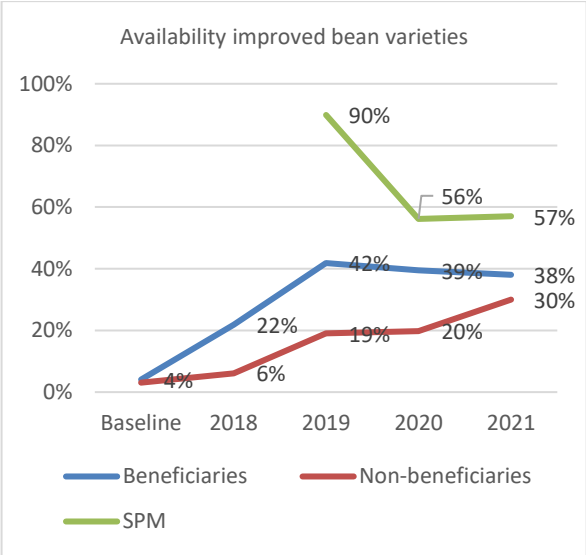


Source: HH Surveys 2017-2021

Technology adoption – indicator I4.2b

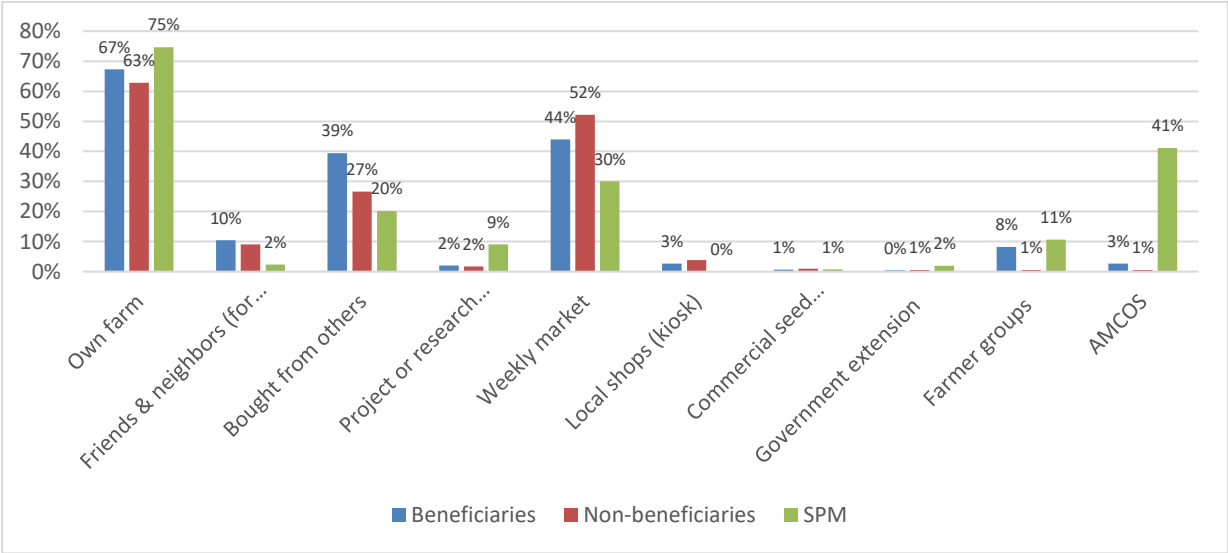
Over the past 3 years the overall improved technology & GAP adoption increased from 18% to 54%. The 2021 increase is attributed to an increase in improved variety and correct spacing adoption. Pesticide application experienced only a slight increase. Improved varieties adoption experienced a slight decrease, as the majority of beneficiaries prefer to stick to the production of the local Kigoma Yellow variety. The availability of improved bean varieties has increased from 4% at baseline in some areas of the region in 2017, to an average availability of 38% today among smallholder beneficiary farmers. Furthermore, adoption levels rose from no adoption at all to 63%, 22% and 5% in 2020 by SPM beneficiaries,

beneficiaries and non-beneficiaries, respectively. However, in 2021 we see a drop for both beneficiaries and non-beneficiaries, as preference for Kigoma Yellow variety increased in the face of a declining market for red kidney beans.



Seed sources for beans

Positive changes are observed in the trend of bean seed sources. Today fewer beneficiary farmers get their seed for free from friends & neighbours (10% against 40% in 2017), local shops (3% against 12% in 2017) or from weekly markets (44% against 64% in 2017). With WFP pivoting towards accepting Kigoma Yellow, more and more beneficiary farmers are reverting to using seed from their own farm, with the weekly market and friends and neighbours also remaining as major sources of bean seed.



Sunflower production and income

In 2021, the adoption of sunflower has been a major success in Kigoma region with a total of 1250 ha were cultivated compared to 20 ha during the baseline. Based on input credit and seed cake production data, the estimation is that at least 1000 tons were produced in Kigoma region this season. The SAKIRP input revolving funds for AMCOS, the Pyxus contract farming and collaboration with the agro input dealers for sunflower hybrid seed made bulk production possible. Farmers who planted the crop are very enthusiastic about the additional income. Farmers appreciated the performance of sunflower, the low production costs, income diversification, the drought resistance and the possibility to have a second drought resistant crop after maize or beans.

In contrast to cassava, sunflower offers good opportunities to deploy the value chain approach, as the collaboration with the private sector (seed producers, large and local millers) is excellent. With the production of 1200 tons, the established input supply and marketing chains and booming prices, sunflower is becoming an integral part of the farming systems in Kigoma region

The performance of sunflower shows the crop has a high potential for increasing smallholder farmers' household income as well as stimulating small-scale processing activities. It had a large impact on several actors within the value chain; sunflower growers benefited from high edible oil prices this year, while processors also benefited from a greater and increased supply of raw and unprocessed grain materials to process and feed the local mills.

Availability and Adoption of Improved Sunflower Varieties - indicator I4.2c

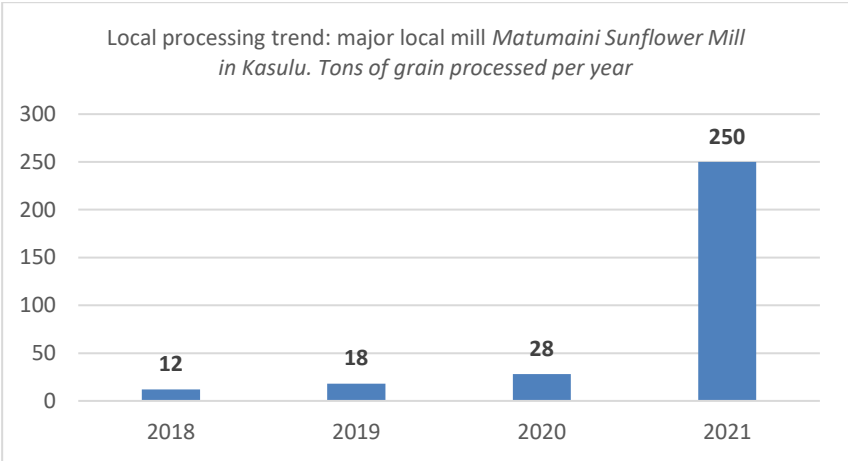
Significant progress seems to have been made over the past year regarding GAP adoption as sunflower was promoted a new crop with an input package. Improved seeds - specifically supersun 66 - reported to be available and adopted. 64% of the sunflower production came from supersun 66 due to reasonable prices and bulk supply by Silverlands in combination with SAKIRP revolving input funds. 85% of the SPM farmers and 26% of general beneficiaries purchased their seeds through the AMCOS input revolving fund. As production is increasing, private sector agro-dealers are investing more in hybrid seed supply.

Sunflower trading and marketing indicator I4.4 c

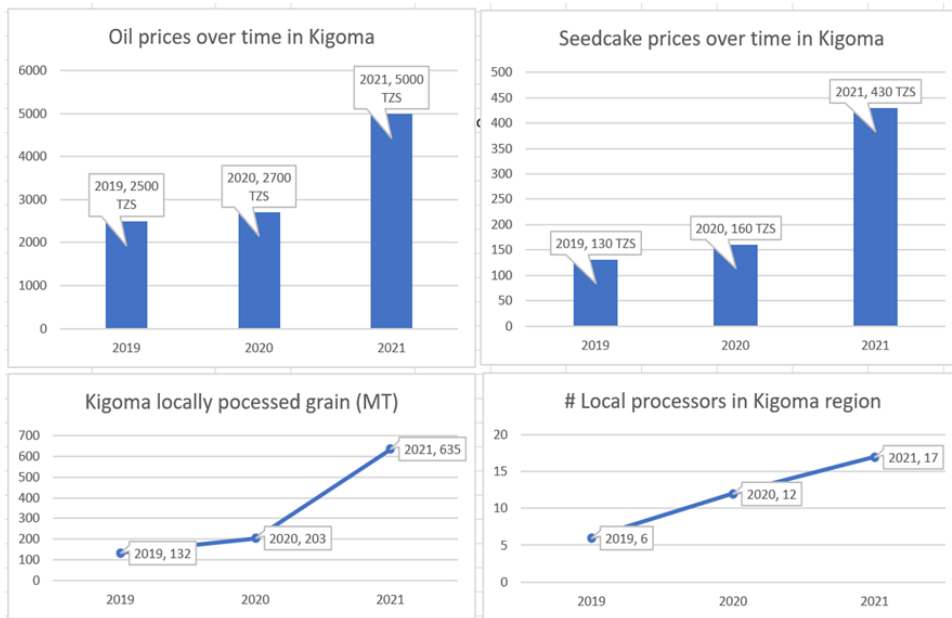
The government policy of substituting Asian palm oil and the aggressive competition between the main mills in the Tanzania central sunflower belt increased the sunflower grain prices to >1000 Tsh/kg. Unfortunately, the Pyxus contract farming model had only a limited success. Only 332 tons of the estimated 1000 tons produced were aggregated by AMCOS and sold to Pyxus. The massive side-selling of 70% happened because local processing was much more profitable than sunflower grain selling and Pyxus was late to adjust to the market dynamics on the ground. As a consequence, Pyxus will not continue the structured production and marketing arrangements but only be available for being the crop next season. While individual farmers gained a lott from processing their grains locally, the down side is that AMCOS could not establish themselves as main trading partners and the sunflower input loan recovery became more cumbersome.

Sunflower processing

With the sunflower price increases from 2500 Tsh/litre in 2019 to 5000 Tsh/litre in 2021 and the increased production, the local processing units were booming. The example below illustrates that local processing more than quadrupled in Kasulu during the scaling up of sunflower production. The number of processing units tripled in two years to 17. The large processing industries have not yet posed an obstacle for the local processors in Kigoma.

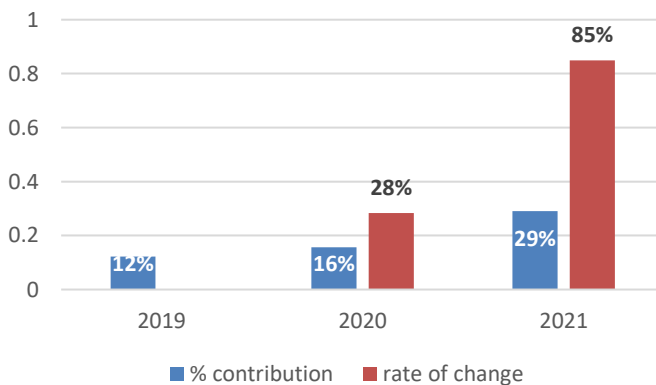


Source: data from important local processor in Kasulu (metric tonnes)



SAKIRP will continue to support the dual track approach: the grain commodity model in areas where there are strong and functional cooperative societies and the local processing model where there is a high interest to invest in local processing capacity. The grain or raw oil sold to the large industrial plants in Dodoma or Arusha offer a guaranteed market for extra production that will not be absorbed by local processing in the future. These mills are currently only working at 20-40% of their capacity and provide a back-up market albeit at a lower profitability for producers. In 2022, AMCOS leaders expect that the production will double or triple in Kigoma depending on the input credit support that will be provided. The further boost of the sunflower production will make raw material available for local processing and the central millers without that price will collapse.

Figure 28: Changes to sunflowers' contribution to household income over time



Soybean production

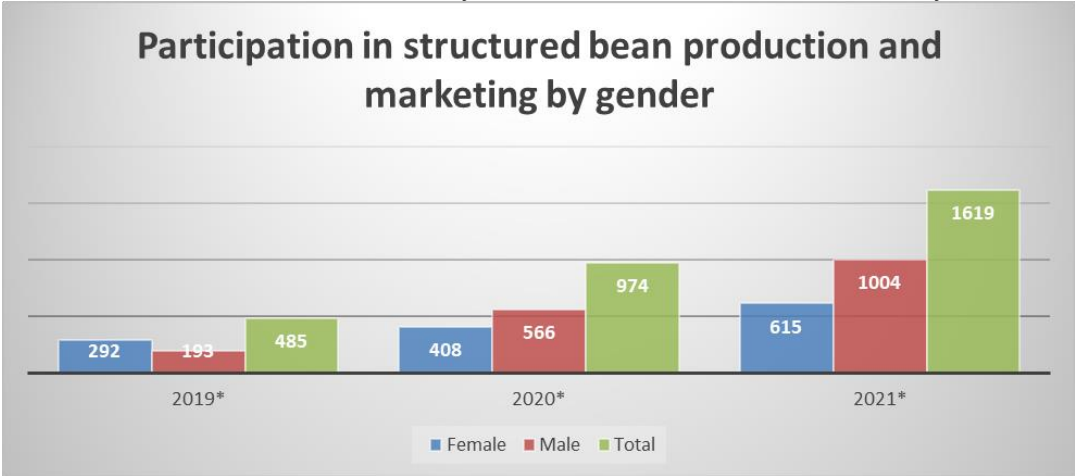
A soybean contract farming pilot of 225 ha is being implemented in close collaboration with Silverlands and TADB. Silverlands will provide the seeds, inoculum, technical expertise and guaranteed market uptake. SAKIRP trains and coaches, farmers and extension workers. The input loans (fertilizer – 130 million Tsh) will be facilitated through TADB and the PASS/ SAKIRP co-guarantee fund. Silverlands focuses on Kigoma because the region can produce soybeans earlier so to ensure continued supply for their poultry feed industry in the Southern Highlands. AMCOS and medium scale farmers expressed strong interest in soybean contract farming to take advantage of the prevailing good prices. The adoption of soybeans in Kigoma will increase and diversify the income of smallholder farmers. Soybeans are a more robust leguminous crop than beans. They are less susceptible to adverse wet weather conditions and will fix more nitrogen to counteract the general decline in soil fertility.

2.7 Performance output 5: marketing & trade.

The reporting period coincides with the third year of structured production and marketing activities aimed at increasing smallholder farmer access to markets. During this period ramped up the initiative to link smallholder farmers to the WFP commodity supply chain. The volume of beans supplied to WFP through project facilitation increased by over 300% to reach 1300 metric tons. This steep increase was mainly due to the landmark breakthrough which came with WFP’s decision to buy the locally produced Kigoma yellow beans. WFP’s decision to buy the commonly produced yellow beans opened structured marketing opportunities to a wider spectrum of smallholder farmers. While the project directly supported 1620 farmers with revolving input loans, an estimated 4000 farmers sold beans to WFP via the network of AMCOS supported by SAKIRP. The range of bean buyers also increased during the reporting period as Silverlands Tanzania intervened to purchase red kidneys for the export market in Europe. The sunflower market linkage between Pyxus Tanzania and smallholder farmers yielded mixed results but generated several useful lessons for the project and partners.

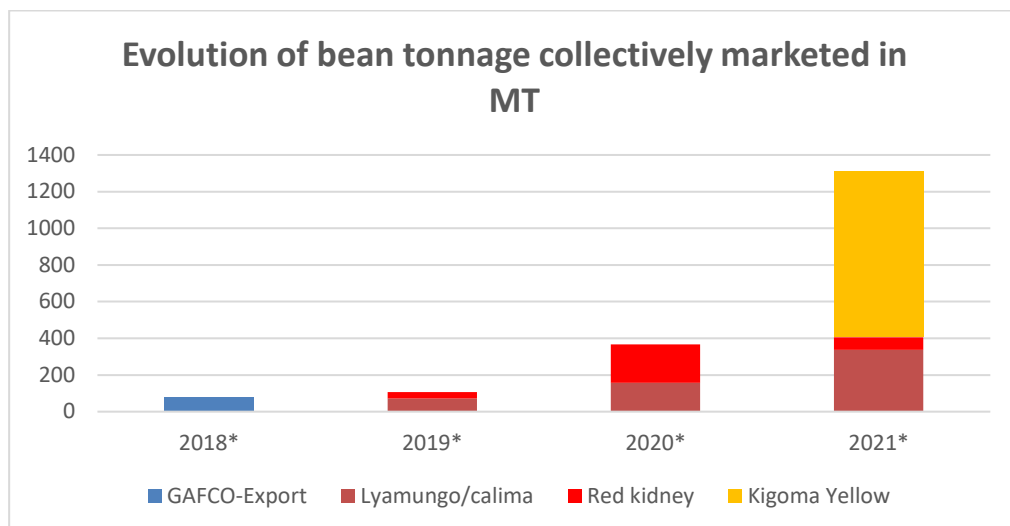
Structured bean production and marketing arrangements

The 2020/2021 agricultural season saw the number of farmers participating in structured production arrangements grow by 66% to reach 1619 farmers. The growth is indicative of the increased confidence that farmers have in collective marketing actions under the umbrella of AMCOS organisations. Opening of the WFP market to the supply of yellow beans lowered the entrance barriers for most farmers who normally fail at the hurdle of procuring improved bean varieties that are not readily available but more costly. Despite the overall growth in farmer participation in structured production arrangements, the proportion of women dropped from 42% the preceding year to 38% in 2021. This decline can be partly explained by the growing perception that beans are a viable option for male farmers who previously viewed it as a women’s crop. Tough credit vetting criteria that put men on an equal footing with women tend to exclude women who traditionally have limited access to collateral-worthy assets.



The reporting period also saw an increase in the number of AMCOS formed or rejuvenated to organize collective marketing targeted at the WFP marketing opportunity. From a baseline of 3 AMCOS in the 2019/2020 season, the reporting saw the number of AMCOS involved in structured bean production rise to 8. Thus, the presence of the WFP market has triggered an institutional revolution which transforms smallholder farmers from loosely organized producer groups to formally registered cooperative societies that enjoy legal recognition and support.

Alongside the growth in farmer participation in structured production, the use of AMCOs as vehicles for the aggregation of beans has led to a growth in the volume of commodities aggregated and collectively marketed. The growth in bean volumes reflects the inclusive nature of AMCOS as they are open to aggregating and collectively marketing produce is produced by non-members. The graph below shows that the volume and variety of beans collectively sold by smallholder farmers has trended upwards since the pilot season of 2019.



Sunflower value chain market linkage

In the 2020/2021 agricultural season, the project launched a full-scale structured and production linkage in which Pxyus Tanzania signed contracts with smallholder farmers for the purchase of their unprocessed sunflower grain. To ensure good agronomic and post-harvest practices, the company provided field staff who complemented the government extension system.

Soybean value chain pilot market linkage

In addition to beans and sunflower, the project extended structured production and marketing arrangements to soybeans which comes in as an additional value chain to the three that the project has been working on. The soybean market linkage pilot is taking place within the framework of a production and marketing contract between Silverlands Tanzania as the market off-taker and some selected (5) AMCOS in Kibondo and Kakonko district. The total acreage planted is 265 distributed across a total of 170 farmers. The provision of seed was done on a credit basis to the value of TZS 14 million. Silverlands will have the exclusive right to purchase the harvested soybeans at a contract price of TZS 1450/kg.

2.7.1 Progress of indicators

The proportion of smallholder farmers directly participating in structured marketing relationships considerably increased during the reporting period.

Result 5: Improved market access and sustainable trade											
Indicator	Baseline			2018		2019		2020		2021	
	Endline Target	Baseline Year	Baseline Value	Target	Actual	Target	Actual	Target	Actual	Target	Actual
I5.1a - % of smallholder producer groups participating in structured cassava market relationships	10%	2017	0%	2%	0%	5%	0%	10%	0%	20%	0%
I5.1b - % of smallholder producer groups participating in structured bean market relationships	25%	2017	0%	2%	1%	4%	3%	8%	13%	15%	20%

Result 5: Improved market access and sustainable trade											
Indicator	Baseline			2018		2019		2020		2021	
				Target	Actual	Target	Actual	Target	Actual	Target	Actual
I5.1c - % of smallholder producer groups participating in structured sunflower market relationships	15%	2019	0%	-	-	-	0%	-	0%	-	3%
I5.2a - Value of cassava sold through structured marketing by smallholder producers (Million TZS cumulative)	200	2017	0	60	0	100	0	300	0	150	-
I5.2b - Value of beans sold through structured marketing by smallholder producers (Million TZS cumulative)	1 600	2017	21	100	130	200	300	400	1,100	1 000	3 600
I5.2c - Value of sunflower sold through structured marketing by smallholder producer groups (Million TZS cumulative)	1 000	2020	0	-	-	-	-	-	0	200	260 ¹¹
I5.3a - % increase in sales by local cassava traders	30%	2019	0%	-	-	0%	0%	-	-	40%	14%
I5.3b - % increase in sales by local bean traders	30%	2019	0%	-	-	0%	0%	-	-	40%	-25%
I5.3c - % increase in quantity processed by local sunflower processors	50%	2020	0%	-	-	-	-	0%	0%	30%	213%
I5.4a - % of farmers accessing objective sources of cassava market information	50%	2017	41%	50%	33%	50%	25%	50%	29%	50%	29%

¹¹ The estimated processed value generated by SAKiRP is around 700 million TZS more than reported, with at least 700 tons of sunflower being side sold and therefore not passing through official statistics.

Result 5: Improved market access and sustainable trade											
Indicator	Baseline			2018		2019		2020		2021	
				Target	Actual	Target	Actual	Target	Actual	Target	Actual
I5.4b - % of farmers accessing objective sources of bean market information	50%	2017	29%	35%	32%	40%	23%	50%	30%	50%	30%
				Target	Actual	Target	Actual	Target	Actual	Target	Actual
I5.4c - % of farmers accessing objective sources of sunflower market information	50%	2019	7%	-	-	-	7%	10%	18%	35%	85%
				Target	Actual	Target	Actual	Target	Actual	Target	Actual
I5.5a: % of SME reporting benefits from business association membership	75%	2019	0%	-	-	-	-	75%	79%	75%	87%
				Target	Actual	Target	Actual	Target	Actual	Target	Actual
I5.6a: % reduction of transport costs to the nearest weekly market	75%	2020	0%	-	-	-	-	35%	51%	35%	Awaiting post-data
				Target	Actual	Target	Actual	Target	Actual	Target	Actual
I5.6b: % traffic increase by motorcycles and cars - weekly market days	50%	2018	0%	-	-	-	-	50%	271%	50%	Awaiting post-data
				Target	Actual	Target	Actual	Target	Actual	Target	Actual
I5.6c: # bridges with assured all season river crossing	70		0	5	3	15	8	30	9	30	38

¹¹ New indicator with data being available from 2021

Explanation of selected indicators

Indicator	Comments
15.1a - % of smallholder producer groups participating in structured cassava market relationships	The progress on this indicator has been put on halt pending the development of the necessary capabilities to finance pre-aggregation and holding of stocks of cassava. The project strategy is to develop aggregation capabilities in beans first, win the trust of financing institutions and build AMCOS' own reserves of own capital
15.1b - % of smallholder producer groups participating in structured bean market relationships	This indicator expanded during the reporting period owing to the aggregation and sell of various varieties of beans to WFP and Silverlands Tanzania. WFP's decision to purchase yellow beans opened the room to more farmers and more groups
15.2b - Value of beans sold through structured marketing by smallholder producer groups (Million TZS)	The value of beans collectively sold increased by more than 300% over the previous year. This was mostly due the opening of the WFP market to yellow beans produced in Kigoma and WFP's willingness to pay a premium on beans produced by smallholder farmers
15.3a - % increase in sales by local cassava traders	Dried cassava sales by traders increased in response to the recovery in prices. Moreover, some traders accessed loans under the credit co-guaranteeing facility thereby increasing their ability to aggregate and sell more cassava stocks
15.3b - % increase in sales by local bean traders	Bean stocks traded by SMEs declined by 25%. This can be linked to WFP's decision to buy yellow beans through AMCOS. The reduced volumes traded by traders are suggestive of the growing role of AMCOS relative to traders in bean trade.
15 - % of farmers accessing objective sources of cassava and bean market information	The proportion of farmers accessing objective information has remained stagnant. Information on markets is relayed by FAAB coaches and agricultural extension workers. The number of FAAB coaches has remained the same and information is published at aggregation centres run by AMCOS

1.1.1 Progress of main activities

The following table provides an overall evaluation the implementation status for the stated activities. As the project nears completion, all market surveys have been completed. Most of the focus is on continuous on-the-job support targeted at both farmer organizations and private SMEs operating within the relevant value chains.

	Progress			
	A	B	C	D
Conducting market surveys				
National market research and intelligence gathering	X			
Supporting collectors, processors and traders in VCD initiatives and facilitate market linkages				
Market linkage and promotional support to SMEs		X		
Business development support to SME aggregators		X		
Business development support to SME processors		X		
Strengthening the existing market information system(s) for the major crops				
Collect, collate and disseminate market information		X		
Supporting public infrastructures and sale points				
Equipment and material support to village aggregation centres	X			
Technical support to aggregation management committees	X			
Strengthening advocacy capacities regarding trade issues and other issues with the value chain				
Support the development of an effective Business Membership Organisation of SME aggregators and processors			X	
Training and capacity development on cross-border trading			X	

2.7.2 Analysis of progress made

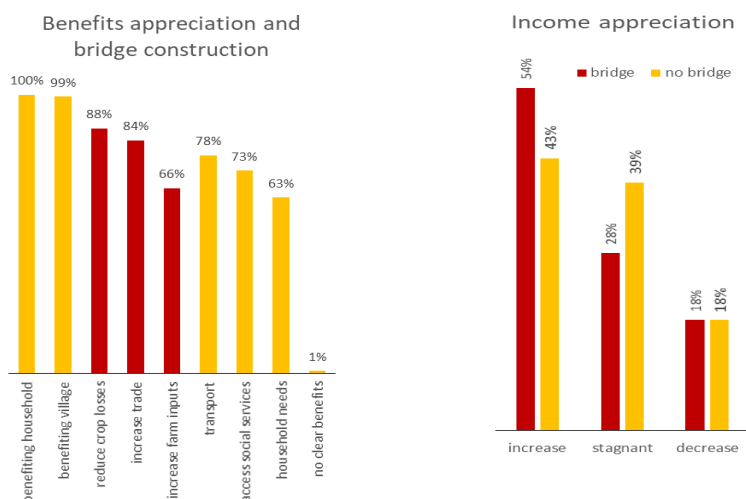
Structured marketing collaboration between farmer cooperatives and WFP

The quantity of beans sold by smallholder farmers to WFP increased by over 300% from the preceding to reach 1250 metric tons. 50 metric tons were sold to Silverlands Tanzania for exportation to Europe. The total number of farmers who aggregated and sold their beans to WFP is estimated at 4000. Notably, 60% of the total volume of beans consisted of the Kigoma yellow variety which, hitherto, was confined to informal marketing channels.

Access to markets – construction of stone arch bridges

The highlights of the household survey with regards to stone arch bridges are the following:

- The target of 80% benefit appreciation is exceeded
- Increased agribusiness opportunities are considered important benefits
- Women are slightly more positive about the benefits.

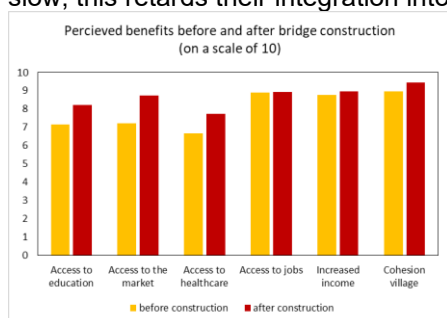


Next to the economic advantages, women appreciate the access to social services especially dispensaries and maternity wards. Children can access schools during the peak rainy season. In some villages, there is anecdotal evidence how prior to construction, lives were lost because people waded through the river during floods.

General challenges constraining access to markets

Progress under the market access and sustainable trade result has been slowed by several factors as detailed below.

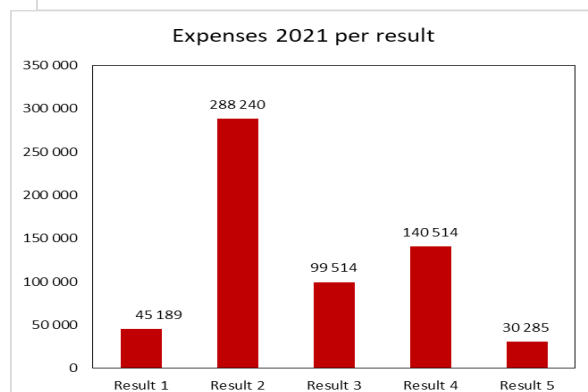
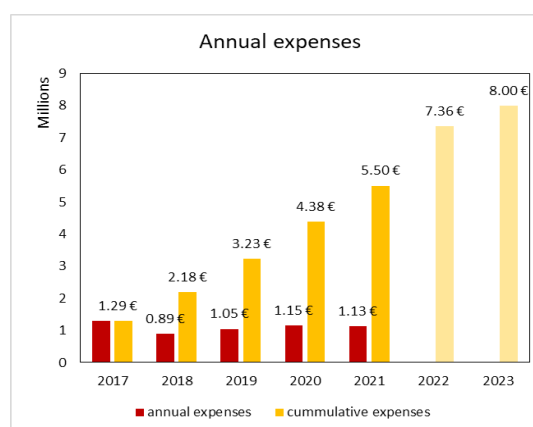
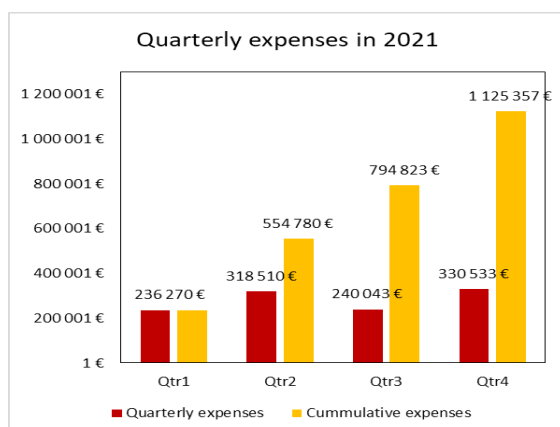
- The continued dominance of the informal marketing system undermines efforts to develop more structured marketing arrangements. The informal crop traders tend to fuel side-selling activities and this discourages more formal buyers from entering into contract marketing arrangements
- The level of bean yields remains low and this leads to low returns on input investments whilst making it difficult to mobilize commodity volumes that are commercially attractive to big buyers.
- The progression of producer groups to legally-constituted and functional cooperatives has been slow; this retards their integration into structured marketing systems.



3 Budget monitoring

By 31st December 2021, the overall SAKIRP overall budget turnover was 69%. The activity budget turnover was 58%. While the expenditures for operational costs match the budget, the situation is different for activities. This is a general trend of agricultural development projects and SAKIRP is no exception. The SAKIRP cost efficient approach allowed for a project extension till June 2023. The full budget absorption hinges on the successful implementation of the infrastructure component (bridges, AMCOS warehouses and especially the Nyakitonto crop commodity market) in 2022.

In Euros	Total Budget	PERIOD					SUMMARY		
		2017	2018	2019	2020	2021	Total Expenditures	Budget Balance	Disbursement Rate 2020
Total General	8 000 000	1 293 891	889 272	1 048 091	1 147 885	1 125 257	5 504 396	2 495 604	69%
A - Activities	4 260 000	346 980	367 794	468 619	667 169	603 743	2 454 305	1 805 695	58%
A01 - Value chains management and coordination mechanisms are installed and steer cassava and beans value chain development.	312 000	113 705	15 867	20 270	56 781	45 189	251 812	60 188	81%
A02 - Sound financial mechanisms are developed and financial organizations are strengthened to support value chains development.	2 030 000	26 850	26 538	179 990	389 883	288 240	911 501	1 118 499	45%
A03 - Public and private chain supporters provide effective services to value chains actors.	585 000	86 330	147 969	98 007	100 837	99 514	532 657	52 343	91%
A04 - Stronger position of smallholders in the value chains	852 000	41 381	162 541	146 310	86 294	140 514	577 040	274 960	68%
A05 - Improved market access and sustainable trade	481 000	78 715	14 880	24 043	33 374	30 285	181 297	299 703	38%
B - Technical staff	2 054 400	519 732	360 341	349 042	313 093	316 228	1 858 436	195 964	90%
X - Reserve	93 050	-	-	-	-	-	0	93 050	0%
Z - General means	1 592 550	427 178	161 137	230 429	167 623	205 386	1 191 753	400 797	75%



4 Risk & issue management

Identification of Issue			Issue analysis	Issue Treatment			Follow-up issue	
Issue Description	Period of	Issue	Potential	Action(s)	Resp.	Deadline	Progress	Status
Corona pandemic will impact on the implementation of project activities through sick employees and delayed activities.	10/03/2020	OPS	Medium	Update prevention measures in line with GoTz regulations and WHO/ HQ instructions	Goekint Koen	N/A	GoTz policy is that socio-economic activities should continue without impediment	In Progress
				Request for project extension till Dec 2022 (implementation period)	HOLLEVOE T Steven	30/05/2020	Extension has been granted till Dec 2022	Completed
				Vaccination employees	Representation	N/A	only 5% project staffs accepted vaccination but government has launched information campaign and made vaccines available all dispensaries	In Progress
Employees will leave the project prematurely in the closure phase leading to a disruption of activities during a critical time of capitalisation, finalising activities and budget absorption.	08/04/2020	OPS	Medium	Discuss with representation incentive modalities so that staffs are encouraged to stay until the closure of the project.	Goekint Koen	N/A	Representation was informed about the challenge of retaining employees during the closing period of a project to avoid high staff turn-over as experienced with NRM. The proposal to provide assistance for further training after project closure was submitted to RR. The implementation time was extended with another 5 months which offers additional	In Progress
AMCOS are the critical concept for implementation and sustainability of SAKIRP. At the same time they are young organisations with many limitations. Need to build AMCOS with integer management, credibility and competitive business orientation in the difficult historical context of dysfunctional cooperative societies in Tanzania.	02/09/2019	DEV	High	Move input credits from VICOBAS to AMCOS and develop proper procedures and checks & balances between AMCOS and member groups for the management of the credit revolving funds	MUSINAM WANA Earnest	N/A	89% of in kind loans were moved to AMCOS and can be tracked. Loans of 23.000 euro remain with groups/ VICOBAS that are difficult to track. Vision Fund is considering coaching these groups. 2 staffs were trained on SAVIX for VICOBA loan management.	Completed
				AMCOS with a sound management track record and integer leadership are eligible.	Technical Assistance	30/04/2021	Eligibility criteria developed for assessment AMCOS. Screening is in progress.	In Progress
				Capacity building AMCOS business & financial management	Technical Assistance	N/A	on the job backstopping done by FAAB coaches that act as shadow managers of AMCOS. PASS grant includes financial literacy training and business plan support.	In Progress
				Oversight by cooperative department & audits.	DCO District Cooperative Officer	N/A	District cooperative officers will carry out quarterly inspections. COASCO will audit the AMCOS accounts.	In Progress

Identification of Issue			Issue analysis	Issue Treatment			Follow-up issue	
Issue Description	Period of Identification	Issue category	Potential Impact	Action(s)	Resp.	Deadline	Progress	Status
				ownership an checks and balances			failed to reach the target in Jan 2022. Many even had a lot of problems to achieve the 95% reimbursement rate of the input revolving fund by their members.	
				Introduction of digital financial tools to reduce cash handling and limit fraud	MUSINAM WANA Earnest	N/A	after assessing the options (DMA, Mastercard foundation) the digital tools were cancelled because: 1. no ready made product is available for use at the grassroots, user fees exceed	Cancelled

30% of the budget needs to be absorbed in a meaningful way during the last year which will require additional efforts and review local contribution principle.	31/12/2020	PRIORIT Y	High	reduce local contribution so that the construction of bridge is enhanced	Steering committee	31/03/2021	local contribution can be applied in a flexible way	In Progress
				construction of AMCOS warehouses as full contract	Steering committee	31/03/2021	steering committee reviewed decision- warehouses will be constructed as force account in order to overcome VAT exemption constraints and construct more cost efficient so funds for the Nyakitonto market are available. The construction of ware houses has started.	Cancelled
				Construction of Nyakitonto crop commodity market	VAN DER VOORT Willem	31/12/2021	Market master plan developed. Market will be constructed with prefabricated steel structures to allow for faster procurement and construction during the remaining project period	In Progress
VAT exemptions have been stalled by TRA as a consequence many operations have come to a standstill. The expenditures have been reduced the administrative follow-up.	03/05/2021	PRIORIT Y	None	Follow-up of TRA to obtain VAT exemptions based on specific agreements	Goekint Koen	N/A	Ministry of Finance instructed TRA to provide VAT exemptions in line with specific agreements Responsibility VAT exemptions at regional level. VAT exemptions basis	Completed
Renewal PASS grant agreement for the co-guarantee fund which is essential to speed up loan agreements between TADB and AMCOS in the ongoing aggregation season	01/10/2021	DEV	High	renewal grant agreement	HIEN Naloyare	17/12/2021	letter of interest signed , follow up with grant desk done	Late
Long administrative processes lead to delay of bean payments by WFP causing side selling and undermining structured aggregation by AMCOS	03/05/2021	DEV	Medium	Sensitisation AMCOS regarding WFP procedures that are not aligned with the seasonal requirements on the ground. AMCOS that want to trade with WFP should be well aware of this and factor in the TADP loans in their cost analysis	MUSINAM WANA Eamest	N/A	discussion with AMCOS ongoing	In Progress
				Diversify the market linkage for AMCOS. The pilot of Silverlands was a win-win situation for AMCOS and the private sector.	MUSINAM WANA Eamest	N/A	The prospection visit of Silverlands to Kigoma AMCOS opened up new opportunities for trade and financial linkage through contract farming.	In Progress
				WFP promised a more streamlined approach with AMCOS that have traded successfully in	MUSINAM WANA Eamest	N/A	More AMCOS have been registered as AMCOS vendors which allows for more delivery points . Delay payments being	In Progress
				the past. Successful AMCOS would have their own procurement cycle (forward purchase contracts).			discussed at regional and HQ level	

6. Synergies and complementarities

6.1 With other interventions of the Portfolio

The portfolio focuses on other Enabel projects. There is currently only one other Enabel project in Tanzania: WASKIRP. The Natural resources for economic development project – Kigoma and the Maisha Bora pastoralist project – Arusha were closed in 2020-Q1. The projects in Kigoma will contribute to the new bilateral programme Tanzania- Belgium albeit both sectors will not be included in the next phase.

WASKIRP – Water sector – Kigoma

Demographical growth and agricultural activities are contributing a lot to the destruction of watershed areas and the pollution of surface water. SAKIRP does not support the cultivation in watershed areas. The water project benefited from the SAKIRP bridge component: one bridge is used for pipe laying across the river. The water project could further build on the principle of local contribution initiated by SAKIRP. Villagers contribute the digging of water pipe channels. WASKIRP and SAKIRP share finance and administrative staff & transport pool in an effort to reduce overhead costs.

Belgian Tanzanian Study and Consultancy Fund

The Belgian Tanzanian Study and Consultancy Fund has funded a Feasibility study for construction of stone paved roads to increase the income of Women and Youth in Kigoma municipality. This is linked to the experiences of Enabel in Burundi and Rwanda. The Fund is available for studies and consultancy initiatives from government institutions.

6.2 With third-party assignments

Beekeeping project EU – Ministry Natural resources

SAKIRP detached the technical adviser marketing to start up the beekeeping project for 4 months. The project benefited from the network, experience and logistical support of SAKIRP.

6.3 Other synergies and complementarities

Kigoma region hosts several agricultural and economic development projects targeting both refugees and host communities. The main projects with a link to value chain development are MEDA and UN Kigoma Joint Programme. SAKIRP has systematically reached out to new projects to agree collaboration mechanisms. All these projects participate in the SAKIRP regional stakeholders' meetings and the sponsored district agricultural sector meetings. A challenge encountered in this process is that implementation is often outsourced to different local partners who do not have sufficient appreciation of the modalities for collaborating in a complimentary way. There is an overlap in the value chains (beans & cassava) and in some districts the targeting of smallholder farmer groups.

SAKIRP leverages resources availed by other projects within the region. For instance, aggregation of beans produced by SAKIRP-supported farmers is done in go-downs that were refurbished and equipped by AGRA TIJA Project. Further, AGRA and Enabel have jointly funded the printing of the Farming as a Business Manual which is used across both projects. In the area of post-harvest management, SAKIRP uses training materials produced by the UN Kigoma Joint Program. The UN one project is now requesting to bring on board the AMCOS for structured production and marketing.

The delivery of smallholder beans to the WFP procurement system is being upscaled by SAKIRP. The aim is to deliver at least 1500 T quality beans produced by smallholder farmers for the refugee camps in Kigoma. The Belgian government is one of the donors of UNHCR/WFP supporting the Burundian refugee camps in Kigoma.

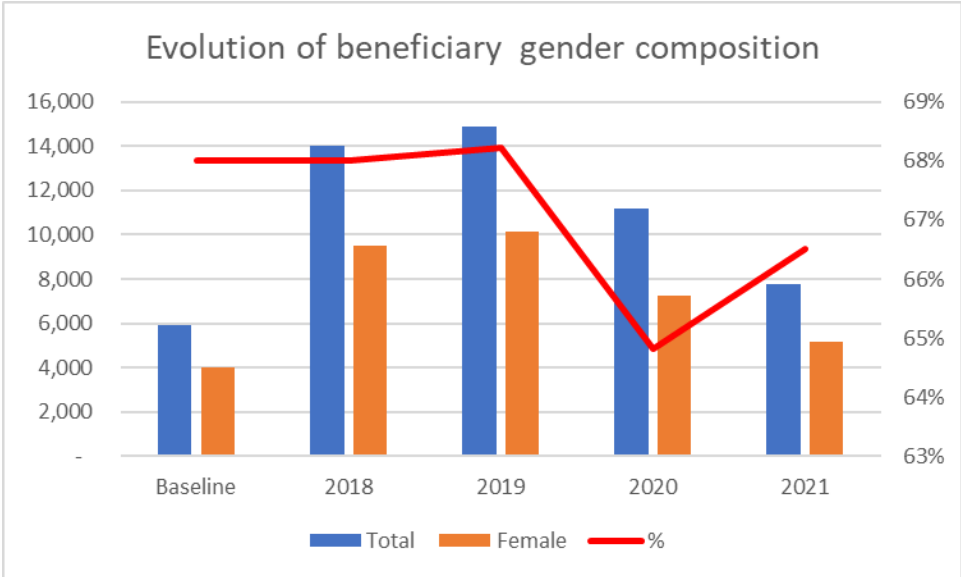
The project actively works to leverage local capacity and an example of this are the two MoUs entered with TCCIA and SIDO. The project works with TCCIA to promote cross-border business coordination and works with SIDO to promote adoption and utilisation of value adding technologies.

Collaboration with the national road agency TARURA is close for operational issues of contract management of stone arch bridges. The agency is currently mainstreaming the stone arch bridge technology at national level.

7. Transversal Themes

7.1 Gender

One of the focal themes for SAKIRP is the promotion of gender equity and women economic empowerment at all levels of project implementation. One of the most strategic decisions made by the project to reach more women farmers was the use of village savings and lending groups as an entry point for value chain development. To that end, the inclusion of women the direct beneficiary population has been deliberate and laid the foundation for equitable engagement of women farmers in the various value chain development actions. As shown in the graph below, the proportion of female beneficiaries participating in the project has been consistently above 60%. However, the decline observed in 2020 could be attributed to the tendency for women-dominated groups to remain informal and not transition to more formal organisations such as AMCOS.



The design of intervention-level strategies has also prioritised the specific needs of women. Notably, the decision to promote local aggregation of beans has served to bring markets closer to women who are often when farmers rely on private intermediaries to reach remotely-located markets. Despite the strategies put in place, the progression of women towards farming as a business has lagged behind that of men. The number of women participating in structured marketing arrangements has continued to go down from 58% in 2019 to 45% in 2020 and 38% in 2021. This reduction is linked to more strict vetting processes which consider the creditworthiness of farmers. Women tend to be left out as they have a weaker collateral base and are more risk averse. The participation of women in production and marketing was different for beans and sunflower. For, sunflower the women participation rate was even lower at 30% of the total beneficiaries. The growing interest of male farmers in structured farming arrangements could be one of the factors contributing to reduction in overall proportion of women farmers participating.

Gender disparity income	gross yearly income Tsh		
	non beneficiary	beneficiary	SPM
HH category			
mixed HH	1,350,000	1,580,000	3,020,000
female heade HH	1,350,000	1,600,000	1,700,000
income disparity	0%	1%	-44%

In 2021, the project commissioned an assessment to investigate gender dynamics of farmers' participation in structured production and marketing arrangements. The main findings of the assessment were as follows:

- The participation of women decreases as farmer organisations transition from informal producers and VICOBA groups to AMCOS. Representation of women in leadership structures declines to 21%. This suggests that men become more influential and dominant as the economic significance of the farmer organisation increases. The low representation of women was especially due to the inclusion of tobacco AMCOS in the sample. For mixed crop AMCOS, the percentage of women leaders stands at 30%. At smaller producer group level, the participation of women in group leadership is at least 40%
- 17% of women involved in structured marketing arrangements are female-headed
- Women farmers' access to land is limited mainly due to inheritance laws and entrenched practices that do not prioritise women in the allocation of land
- Women and men do not have significant differences in their decision-making powers on agricultural farming activities

At the level of output, some results are already obtained. See the table below:

Output Indicator	Female	Male
General engagement with project	5183	2610
Farmers participating in contract farming/structured markets	615	1004
Ward extension officers	5	34
FAAB coaches	2	8

Based on the gender assessment study above, the following actions were recommended:

- Provide gender sensitization trainings in AMCOS to encourage full involvement of women in AMCOS leadership
- Revise guidelines for input revolving funds to include a quota and more conducive conditions
- Conscientize AMCOS and financial institutions on gender dimensions of value chain financing (women appear to be better at servicing their loans)
- Conduct a longitudinal analysis loan repayment by both male and female analysis
- Implement flexible aggregation arrangements which improves the accessibility aggregation points by women

7.2 Environment and climate change

Climate change

The effects of climate change in the agricultural system of Kigoma region is increasingly becoming evident. High weather variability makes it difficult for project beneficiaries to properly time their activities as seasonal calendars shift and become more unpredictable. Weather extremes of excess, too little and unevenly distributed rain increase the risk of crop failure and undermine the execution of structured production and marketing linkages. Weather risks have also consistently affected yields and, consequently, the viability of crop production and marketing.

To mitigate the above, the project is undertaking the following actions:

- The introduction of sunflower increases farmers' chances of getting a successful crop during the second and short farming season. This is because sunflower is more drought resilient and can still do well despite the unreliable rains that are now characteristic of the second rainy season.
- Conducting a pilot of soybeans as an alternative to Phaseolus beans. Soybeans are less vulnerable to diseases during periods of heavy rainfall and have a denser canopy and better N fixation.
- Climate-smart agricultural practices are consistently mainstreamed in farming practices for all the three value chains; capacity building training is conducted at the level of extension workers who cascade the training to their smallholder farmer constituencies.
- Systematic promotion of contour lines as a good agronomic practice.
- The project is promoting new bean & cassava varieties which have a short maturity period and can withstand stressful weather conditions.
- Promote stone arch bridges as a low carbon alternative to conventional reinforced concrete bridges. Due to lower use of industrial materials and local sourcing, carbon emissions are reduced by 80% compared to equivalent reinforced concrete bridges.

SAKIRP is one of the 10 Enabel projects participating in the pilot of carbon footprint tracking and reduction with CO2logic.

Environment

The project pro-actively works to conserve the environment and minimize the environmental footprint of project activities. From an agribusiness point of view, the project has engaged WFP as an off-taker of beans for consumption by the refugee population within Kigoma region. Such a production and marketing setup eliminates the need to hauling food commodities over long distances thereby helping to reduce greenhouse gas emissions. By promoting good agronomic practices which increase productivity of available farmland, the project pre-empts the need for farmers to encroach on conserved forest lands. Intensification of production will help reduce the clearance of forests to make way for new and fertile farmland. To ensure that existing farmlands are optimally used and remain productive for longer periods, the project is establishing linkages between smallholder farmers and suppliers of improved agricultural inputs. Thus, in-kind loan mechanisms put in place by the project are expected to increase the application of fertilizer on existing farmland instead of clearing new pieces of land on a frequent basis

Issue	Mitigation effort
1. Encroachment conservation zones (national parks, watershed areas, forest reserves, game reserves) by farmers	<ul style="list-style-type: none"> • Pre-condition for support – no fields in conservation zone or wetlands • Sensitisation producer groups and monitoring by village government & SAKIRP • Promote good agronomic practices (including liming and fertilizers) so that the productivity of already cultivated soils is maintained leading to less pressure on conservation zones. • Do not support construction of bridges in ecologically sensitive areas.
2. Soil erosion – especially in cassava production as canopy closes only after 3 months.	<ul style="list-style-type: none"> • Promote cultivation on closed ridges along contour lines • Promote use fertilizer & manure for better crop growth.
3. Pesticide contamination – biggest threat is insecticide impact on bees. Excessive use of agro pesticides can also contaminate groundwater but this level has not been achieved.	<ul style="list-style-type: none"> • Train farmers on integrated pest management, correct use pesticides and destruction containers • Promote tobacco that is easily broken down and has less residues • Do not promote atrazine and simazine as pre-emergence herbicide • Collaborate bee user associations, honey companies & district bee officer to identify susceptible areas where tobacco should not be used. • Collaborate district water engineer to identify sensitive zones.

7.3 Digitalisation

SAKIRP is leveraging digital tools to improve its project implementation and service delivery process whilst facilitating the integration of value chain actors into the digital economy. The digital M&E system based on the Kobo Toolbox is proving to be an effective system for managing the delivery of extension services, collection of data and dissemination of information to the broad spectrum of value chain facilitators. The project is actively applying digital social network applications, like WhatsApp, to disseminate market information to both farmers and intermediate value chain actors (crop traders and processors). The highly interactive and real-time nature of this WhatsApp makes it an ideal platform to sharing information and initiating market exchanges in a non-bureaucratic and cost-effective way. Similarly, WhatsApp groups have been used by the project to provide remote extension support and promote peer-to-peer learning by agricultural extension agents. Indeed, social applications have emerged as a cost-effective way of coordinating service delivery, sharing information and connecting farmers and other value chain actors to markets

7.4 Decent work

Local economic development, markets for the poor, promotion of small and medium enterprises and public-private partnerships are important concepts which complement the value chain approach to make economic growth inclusive and provide trade and employment opportunities for the poorer sections of the population. The value chains of cassava and beans are highly informal and so are the (self) employment conditions in agriculture. Casual wages and return to labour are low; but this is a general reflection of the smallholder agriculture in East Africa. Seasonal casual labourers of Burundi sustain agriculture in Kigoma Region especially for tillage, weeding and harvesting. Without this source of seasonal labour, many family farms would be even less profitable and not be able to maintain their current levels of production. Formalising employment conditions in agricultural smallholder enterprises would lead to the closure of many. Children are usually not employed in agriculture in Kigoma. The third-party marketing contracts (Casibbeans, WFP, Pyxus) stipulate explicitly the prohibition of child labour. SAKIRP has not come across the use of child labour in activities related to market linkage and production.

8 Lessons Learned

Lessons learned	Target audience
<p>1. Production</p> <p>a. Despite low productivity, the production node is not necessarily the most critical trigger for getting farmers to participate in structured value chains. The availability of ready and liquid markets is a more instant lever which forces farmers to address their production constraints.</p> <p>b. The production node for food crops such as beans remains the highest source of risk with the lowest returns on investment for private investors. This is based on a comparison of results obtained from in-kind loan investments vs results from aggregation financing loans</p>	Min Agriculture VCD projects
<p>2. Agricultural extension service.</p> <p>a. Sustainable improvements in the performance of last-mile agricultural extension staff call for an improvement human resource management and realignment of performance systems and incentives. This is also a task that takes time and calls for full commitment from management authorities.</p> <p>b. The general appreciation that subcontracted NGOs will perform better than the LGA extension service cannot be sustained. Based on the experience in Kigoma, subcontracted NGOs frequently failed to deliver. It is not the implementation mode that counts, but the rigorous selection of individual service providers and performance monitoring to achieve success.</p>	Local government VCD projects
<p>3. Mixed models of seed multiplication</p> <p>Certified hybrid seed has worked well in the sunflower sector, where there are good profits and where larger seed companies support seed production in Tanzania. Formalized bean seed certification has not attracted the turn-over and profit so that it can be sustained by commercial firms. For beans, the better approach seems to train progressive farmers on selection of the best individual plants and develop their own seed supply system. For cassava, the commercial seed entrepreneur (CSE) concept works well for as long as there are large institutional clients spearheading the introduction of new performant varieties. However, to reach a large number of smallholder farmers in the many villages, this model needs to be complemented with community or AMCOS multiplication plots. The transport costs of the cassava cuttings are prohibitive for a cost efficient CSE concept.</p>	Min Agriculture TOSCI Seed companies Dev projects
<p>4. Value chain financing</p> <p>a. The introduction of subsidies in value chain financing should always carry clear timelines for exist to avoid delaying the development of direct relationships. There is a tendency by financial institutions to offload all risks to development partners for as long as possible.</p> <p>b. Efforts to raise external financing for smallholder farmer organisations should always go together with a drive to mobilize own capital to foster local ownership, responsible management and transparency.</p> <p>c. PASS Trust has a delivered some mixed performance in the implementation of the credit co-guarantee facility. While the target of guaranteed loans was reached, the quality and relevance of business plans and financial literacy trainings can be improved. A more pro-active approach will help to secure more loans and reduce the credit application time. The post-loan coaching needs to be stepped up. Awarding the co-guarantee fund directly to TADB would have had a bigger impact on the credit portfolio in Kigoma and would have lowered the overall financing costs for value chain actors.</p>	Value chain development projects financial service providers
<p>5. Gender</p> <p>Focusing on female groups, tends to backfire as most decisions regarding loans, marketing and productive means are made at household level. Gender issues are best addressed in mixed groups that allow for inclusion of household level. Facilitating the discussion about the gender gap at household level offers the opportunity to improve relations and decision making to strengthen the overall well-being of all family members .</p>	Development projects

Lessons learned	Target audience
<p>6. Structured marketing arrangements</p> <p>a. Alongside collateral guarantees, availability of formalised market uptake agreements for agricultural produce constitute the most preferred collateral substitute for collateral-poor smallholder organisations such as AMCOS</p> <p>b. Without guaranteed high volume market offtake channels, the ability of SMEs to fully utilise credit lines provided by banks remain highly limited. SMEs funded by NMB struggled to utilise and service modest amounts because they did not have a clearly designated off-taker for their commodities</p> <p>c. Within a mixed farming set-up, where farmers participate in the production of a variety of crops, shortcomings in commercial arrangements have ripple effects for other crops where the same farmers are involved. In 2021, the delayed marketing process for beans adversely impacted on the aggregation and collective marketing for sunflower.</p>	Private sector Development projects
<p>7. Side-selling by smallholder farmers fails modernisation of agriculture</p> <p>Side-selling by smallholder farmers is the biggest risk and disincentive for a stronger upfront investment in the production sector by banks and private firms. The lack of legislation enforcement and opportunistic political behaviour are bottlenecks that should be overcome if the ministry wants to meet its development objectives</p>	Agriculture projects Min Agriculture
<p>8. Tobacco AMCOS not eager to handle food crops</p> <p>The assumption that commercial crops AMCOS (tobacco and cotton) might be used as vehicles to promote other food crops value chains and increase their income basis did not materialise. The production of sunflower through tobacco AMCOS was a disappointment. This needs more analysis. Hypotheses are: higher tobacco profitability, high risks of sunflower side-selling cannot be managed by AMCOS leadership, missing opportunity of intercropping of tobacco and sunflower and incompatibility of with tobacco seasonal labour agreements.</p>	Agriculture projects Min Agriculture
<p>9. Sunflower processing</p> <p>When a ready market exists for a processed product, the private sector is willing to make the necessary investments without any subsidies from projects</p>	Agriculture projects Min Agriculture
<p>10. Bean quality and upgrading</p> <p>In smallholder farming settings, investment in simple and easy to maintain technologies is more sustainable and cost-effective than industrial technologies which require huge volumes to make commercial sense. Simple sieving tables and fumigation had the biggest impact on bean quality.</p>	Min Agriculture Bean trading firms
<p>11. Digitalisation</p> <p>Simple digital technologies that operate within the intersection of informal and formal systems present great potential to bridge the formal-informal divide and integrating smallholder producers into high value marketing systems</p>	Development projects
<p>12. Rural infrastructure for access to markets</p> <p>Stone arch bridges are a tested and strong technology that offer considerable cost advantages as compared to reinforced concrete and allow for local resource mobilisation. With the budget of 1 reinforced concrete bridge, 5 stone arch bridges can be built with a carrying capacity of 40 tons.</p>	TARURA Min Works

9. Steering

9.1 Changes made to the intervention.

The following important changes were made in 2020:

1. The no-cost extension of the project implementation period till December 2022 was approved. The extended project period will allow for consolidation, strengthening of AMCOS and full budget absorption.
2. After the successful pilot of sunflower in 2 districts, the sunflower value chain development was scaled up in all districts and a strategic partnership with the private sector forged (Pyxus and Silverlands).
3. The soybean value chain was introduced in Kakonko and Kibondo district under a structured and contained pilot sponsored by Silverlands Tanzania
4. Engage TARURA national level for the promotion of stone arch bridge technology
5. The log frame indicators were reviewed in function of the context and realistic assumptions.

9.2 Decisions taken by the steering committee

Decision to take			Action			Follow-up	
Decision to take	Period of Identification	Source	Action(s)	Resp.	Deadline	Progress	Status
Audit Q4 2020.	13/01/2020	CAP - Country Action Plan	Prepare audit 2020 : verify whether all relevant documents in place and carry out pre-audit	HIEN Naloyare	31/07/2020		In Progress
			Liaise with HQ to schedule audit 2020 in function of Coroma prevention measures	HIEN Naloyare	31/07/2020		In Progress
initiative to establish a co-guarantee fund with a grant partner for value chain financing	04/03/2020	Steering Committee	Enabel adopted modality of co-guarantee fund for micro finance which will be applied	MUSINAM WANA Earnest	N/A	Approval representation and operations manager for grant 190.000 euro for PASS co guarantee fund. SAKIRP will still have to make strong follow-up to link eligible SME with PASS and banks	Completed
VI. Promote stone arch technology at national level in collaboration TARURA.	04/03/2020	Steering Committee	promote stone arch bridge technology through exposure of official delegations and presentations during TARURA meetings	Ngeleja Pharies	N/A	TARURA Kigoma has done excellent job by systematically taking TARURA HQ delegations to building sites. The TARURA CEO declared that the technology will be incorporated. Other TARURA councils sent delegations to understudy the Kigoma experience. Symposium TARURA HQ on stone arch bridges and special committee formed. Kiswahili manual being reviewed by TARURA HQ.	In Progress
			Finalise stone arch construction manual	MNGUMI Emmanuel	N/A	Kiswahili manual finalised however project will not print as TARURA has taken over the process.	Completed
			English brochure stone arch bridges focusing on donor audience	VAN DER VOORT Willem	N/A	Draft ready - proofreading & printing remaining	Late
adjust log-frame (sunflower, infrastructure, targets) – details to be presented to next steering committee.	04/03/2020	Steering Committee	Review log-frame with technical team so that it can be submitted as annex to request project extension	Technical Assistance	15/06/2020	Log-frame and new indicators were reviewed by SC 24/11/20. Additional adjustments are required.	Late
Write a capitalisation/lessons learned paper together with WFP around the bean aggregation process	31/08/2020	Intervention Team	Review aggregation experience in collaboration with AMCOS and WFP	MUSINAM WANA Earnest	31/08/2020	done: review with FAAB coaches / review individual AMCOS with FAAB coaches/ data compilation/ video clip bean aggregation, formulation lessons learnt in concise document remaining: feedback WFP	In Progress

Decision to take			Action			Follow-up	
Decision to take	Period of Identification	Source	Action(s)	Resp.	Deadline	Progress	Status
finalising the grant with pass trust for a signature in Q3 2020	14/05/2020	CAP - Country Action Plan	Grant modality with PASS approved operational manager, budget & proposal reviewed. grant proposal with procurement officer in Burundi for further approval - this is now delaying process	HIEN Naloyare	15/06/2020	PASS started implementation grant agreement with review capacity AMCOS & financial literacy trainings. Negotiations AMCOS aggregation loans with TADB and NMB ongoing	Completed
			Monitor PASS implementation: facilitate financial linkage and capacity building of SMEs and producer groups. PASS subsidiary in Kigoma will need a lot of capacity building to make sure that their implementation will meet acceptable standards and that the grant for a co-guarantee fund will indeed translate into tangible SME loans.	MUSINAM WANA Earnest	N/A	Based on existing experience proposals for financial linkage and training by PASS can be submitted for fast tracking	Completed
Set in place and finalize the fin/admin reorganisation and efficiency according to the March HQ support mission	14/05/2020	Quality Assurance Mission	Look into recommendations and identify priorities for restructuring finance and administrative section	HIEN Naloyare	30/06/2020	decisions regarding administrative personnel need to be addressed, Alignment with new bee keeping project funded by EU.	Late
Submit addendum TFF for project extension till Jun 2023	04/03/2020	Steering Committee	Engage national debt committee	HOLLEVO ET Steven	N/A	National debt committee approved extension in Feb 2021	Completed
Implement aggregation capital grants for 10 AMCOS up to a limit of TZS 50 million per AMCOS.	24/11/2020	Steering Committee	Develop grid with verifiable criteria for AMCOS selection and apply	MUSINAM WANA Earnest	28/02/2021	grid with eligibility criteria established	In Progress
Scaling of sunflower value chain development beyond the pilot districts	24/11/2020	Steering Committee	Implementation sunflower value chain development	BIKORA Daniel	N/A	Action plan and market analysis finalised. Collaboration private sector established. Input revolving fund designed for AMCOS.	Completed
Approval of the full contract approach for storage structures,	24/11/2020	Steering Committee	Concept paper warehouses AMCOS	HOLLEVO ET Steven	01/03/2021	draft concept paper submitted steering committee	In Progress
Approval of reviewed log frame and indicators	24/11/2020	Steering Committee	Review indicators	KILIMBA Tumaini	01/01/2021	indicators tracking table being reviewed	Late
Private sector representative in the capacity of an observer in the steering committee	24/11/2020	Steering Committee	Private sector representative signs TOR and non disclosure agreement	HOLLEVO ET Steven	15/02/2021	TOR and non -disclosure agreement ready	In Progress
Expediate the working permits and immigration status of expatriate	24/11/2020	Steering Committee	Obtain working permits and exemption	Goekint Koen	N/A	working permits still pending. expatriate staffs issued business visa/ special pass.	Late
Approval eligibility criteria revolving funds AMCOS	12/03/2021	Steering Committee	Apply eligibility criteria for AMCOS support : input revolving funds and warehouse construction	HOLLEVO ET Steven	N/A	80% AMCOS are complying with criteria - gender quota and management input revolving funds are the most serious constraints	In Progress
Approval reviewed indicators SAKIRP logframe	12/03/2021	Steering Committee	Fully integrate new indicators and report on progress	KILIMBA Tumaini	31/12/2021	indicators are being monitored and reported in annual result report	In Progress
Approval annual result report 2020, financial report 2020 and workplan 2021	12/03/2021	Steering Committee	Forward documents HQ	HOLLEVO ET	15/03/2021		Completed

Decision to take			Action			Follow-up	
Decision to take	Period of Identification	Source	Action(s)	Resp.	Deadline	Progress	Status
Adjust and expedite local contribution for bridge construction to speed up implementation and meet targets.	12/03/2021	Steering Committee	apply minimum trips of stones in function bridge category, help villages with transport	MNGUMI Emmanuel	N/A	various bridges are in different stages of construction and mobilisation of local contribution	In Progress
Adoption of soybean pilot to diversify income, make farming system more resilient and increase income.	09/09/2021	Steering Committee	Implement soybean pilot with progressive AMCOS and medium scale farmers	BIKORA daniel	N/A	pilot of 555 acres with silverlands under way	In Progress
Approval of construction Nyakitonto crop commodity market and allow for budget review to maximize budget absorption.	24/09/2021	Steering Committee	Develop master plan market with stakeholders	DED District Executive Director	15/11/2021	draft master plan approved	In Progress
			develop tendering documents prefabricated steel hangars	VAN DER VOORT Willem	15/03/2022	80% tendering documents available	In Progress
			review budget	Steering committee	15/03/2022	will be table next steering committee	In Progress
Approval construction AMCOS warehouses as force account	24/09/2021	Steering Committee	procurement as force account	Intervention Management	30/11/2021	4 warehouses under construction - next batch planned in 2022-Q2	In Progress

9.3 Strategic re-orientations departures from TFF since 2017.

Strategic re-orientations	justification	Approval steering committee
1 More emphasis on production alongside trade and aggregation	The value chain assessment revealed crucial bottlenecks at the level of production. The quantities of beans produced are small in Kigoma region and availability of improved varieties is limited. Viral diseases threaten cassava production and trade as what happened in Lake Zone and Rwanda.	Yes, meeting 13 th July 2017
2 Pluralistic approach of collaborating with producer groups rather than the single focus on farmer field schools	In Kigoma region, FFS are few and they have been dormant waiting for the next round of ASDP funding. The diagnostic survey of village groups identified the VICOBAS and smallholder producer groups as high potential grassroots structures.	Yes, meeting 13 th July 2017
3 Stronger collaboration with the local government extension system	Only the local government has extension staff on the ground in the districts. Enabel grant agreement procedures are very strict and few local organisations can comply with them. Collaboration with government services does not require these elaborated procedures.	Yes, meeting 13 th July 2017– but monitoring performance is required
4 Investment fund refocused on public infrastructure	The TFF proposal of an investment innovation fund for the private sector met a procurement challenge as Enabel cannot provide grants to private companies. Private companies can only be assisted through credits and not by a grant fund. As a consequence, the investment fund focuses now on public infrastructure, based priorities by district councils,	Yes, meeting 13 th July 2017
5 Be realistic about targets & improvement service delivery component	Limited available budget. Limited demand for business development services. Few organisations that can effectively provide BDS services	Yes, meeting 13 th July 2017
6 Adoption of input credit scheme.	The value chain financing grant was vetoed. As an alternative an in-kind credit supply scheme for inputs was developed to kick-start structured market linkages. It is understood that this is a sub-optimal mitigation strategy that deviates from best practice in micro-finance.	Yes, meeting 28 th October 2018
7 The construction of bridges to improve the access from farm to markets/	The market infrastructure survey showed critical bottlenecks at the majority of sites: no market master plans, no land for expansion, demolishing existing structures would involve compensation and long negotiations, markets are seen as tax enforcement instruments rather than tools to promote trade and employment. In addition, UNCDF made a commitment to construct the same markets. Supporting bridges will improve access to agricultural markets and general service delivery. It is high on the government agenda at regional and local level.	Yes, meeting 28 th October 2018
8 Consolidation of emerging results and not increasing the scope:	MTR recommended to consolidate emerging results in the existing geographical area and with the best groups. The number of groups and wards will not be increased. The focus should on the best 17% groups of the CPI score but with more targeted assistance. As a consequence, the target of 20.000 beneficiary farmers was abandoned in favour of quality, sustainability and long-term impact. The	Yes, meeting 20 th September 2019
9 Adoption of third value chain on a pilot basis in 2 districts	The existing 2 value chains face important constraints: Cassava is in a structural price slump after the recovery of the production in Burundi and Rwanda. The crop is also threatened by CBSV while insufficient tolerant varieties are available. Beans are very vulnerable to climate change – leaving farmers often indebted. As a result, it is difficult to make an impact on the income improvement of smallholders at a regional scale. Sunflower was adopted as a third value chain because of the following advantages: offers a better income than cassava, better resilient to drought than beans, better value addition opportunities (local oil pressing, seed cake for animal concentrates), Better scope for collaboration with local SMEs, market risks are smaller (oil consumed locally, strong preference for sunflower oil) and good fit in crop rotation – use additional season from Feb – May.	Yes, meeting 20 th September 2019
10 Adoption soybean pilot in 2 districts	<ul style="list-style-type: none"> Assured market: Silverlands contract farming + opportunities TADB loan Income diversification farmers & AMCOS – 82% price hike post covid Adding resilient leguminous crop with better N fixation than beans to counteract soil fertility decline in Kigoma. Optimal crop rotation and land use: short-term varieties in masika – sunflower njera season. Consolidation AMCOS as strategic aggregators in Kigoma 	Yes, meeting 24 th September 2021
11 construction Nyakitonto crop commodity market	<ul style="list-style-type: none"> This is the biggest regional crop commodity market. The district developed a clear land development plan and with the construction of the tarmac road the current market needs to be shifted. Investing in the first phase of the infrastructure will attract future donors. The district will put incentives in place so that trading takes place at the new location and will develop a multi stakeholder governance structure. 	Yes, 24 th September 2021

9.4 Recommendations

Recommendations	Actor	Deadline
1. Improvement cassava cuttings supply through: <ul style="list-style-type: none"> Improve logistics of inspecting, harvesting and quality control at ARI Maruku production fields Increase the TOSCI resources or delegate more to districts, so that regular and in-dept are too thinly spread over the vast area of Western Tanzania Step up the certification of cassava commercial seed entrepreneurs and the verification of the quality of the produced cuttings Adhere to minimum standards to contain the spread of cassava brown streak virus i.e., QDS production field 	ARI Maruku TOSCI - MEDA	ongoing
2. Given the importance of AMCOS to the empowerment of smallholder farmers, the regional cooperative office should provide basic cooperative training to agricultural extension workers	RCO	2022-Q3
3. Performance evaluation and incentives for agricultural extension workers must be linked to volumes of produce aggregated and marketed to encourage an end-to-end focus on both production and marketing extension components	DEDs	2022-Q4
4. The District Cooperative Department should consider engaging interns to expand the service outreach to the increasing number of AMCOS	DAICO/ DEDs	2022-Q4
5. Commercialised seed systems work in formalised settings like the sunflower value chain with large processing industries. For smallholder dominated value chains like beans, the strategy should focus on improving local seed systems through on farm selection, phytosanitary measures and seed dressing.	Min Agriculture	Ongoing
6. Belgian development aid will focus more on private sector development in the future. The approval of the tools to support the private sector need to be expediated so that Enabel can fulfil this new mandate.	Enabel HQ DGD	ongoing
7. SAKIRP is one of the first Enabel projects to experiment with the new grant modality of supporting existing guarantee funds. For reality checks, capitalisation and building expertise within Enabel, the experiences are best understudied in 2022.	Enabel HQ	2022-Q2
8. During the exit phase, reduce the local contribution of bridges and warehouses to allow for full budget absorption.	Steering committee	2021-Q1
9. In collaboration with TARURA, the roll out of the stone arch bridge technology nation-wide will increase service delivery and constitute an opportunity to expand the Enabel portfolio in Tanzania.	Represent ation	Ongoing
10. Cooperatives constitute a special form of broad-based within the solidarity economy but it has a longer gestation period. Future interventions should planned to have realistic timelines which allow for the implementation of sustainability strategies	Enabel-HQ	Ongoing

10. Annexes

10.1 Quality criteria

1. RELEVANCE: The degree to which the intervention is in line with local and national policies and priorities as well as with the expectations of the beneficiaries				
<i>In order to calculate the total score for this quality criterion, proceed as follows: 'At least one 'A', no 'C' or 'D' = A; Two times 'B' = B; At least one 'C', no 'D' = C; at least one 'D' = D</i>				
Assessment RELEVANCE: total score	A	B	C	D
		x		
1.1 What is the present level of relevance of the intervention?				
	A	Clearly still embedded in national policies and Belgian strategy, responds to aid effectiveness commitments, highly relevant to needs of target group.		
x	B	Still fits well in national policies and Belgian strategy (without always being explicit), reasonably compatible with aid effectiveness commitments, relevant to target group's needs.		
	C	Some issues regarding consistency with national policies and Belgian strategy, aid effectiveness or relevance.		
	D	Contradictions with national policies and Belgian strategy, aid efficiency commitments; relevance to needs is questionable. Major adaptations needed.		
1.2 As presently designed, is the intervention logic still holding true?				
	A	Clear and well-structured intervention logic; feasible and consistent vertical logic of objectives; adequate indicators; Risks and Assumptions clearly identified and managed; exit strategy in place (if applicable).		
x	B	Adequate intervention logic although it might need some improvements regarding hierarchy of objectives, indicators, Risk and Assumptions.		
	C	Problems with intervention logic may affect performance of intervention and capacity to monitor and evaluate progress; improvements necessary.		
	D	Intervention logic is faulty and requires major revision for the intervention to have a chance of success.		

2. EFFICIENCY OF IMPLEMENTATION TO DATE: Degree to which the resources of the intervention (funds, expertise, time, etc.) have been converted into results in an economical way				
<i>In order to calculate the total score for this quality criterion, proceed as follows: 'At least two 'A', no 'C' or 'D' = A; Two times 'B', no 'C' or 'D' = B; at least one 'C', no 'D' = C; at least one 'D' = D</i>				
Assessment EFFICIENCY: total score	A	B	C	D
		x		
2.1 How well are inputs (financial, HR, goods & equipment) managed?				
	A	All inputs are available on time and within budget.		
x	B	Most inputs are available in reasonable time and do not require substantial budget adjustments. However, there is room for improvement.		
	C	Availability and usage of inputs face problems, which need to be addressed; otherwise, results may be at risk.		
	D	Availability and management of inputs have serious deficiencies, which threaten the achievement of results. Substantial change is needed.		
2.2 How well is the implementation of activities managed?				
	A	Activities implemented on schedule		
x	B	Most activities are on schedule. Delays exist, but do not harm the delivery of outputs		
	C	Activities are delayed. Corrections are necessary to deliver without too much delay.		
	D	Serious delay. Outputs will not be delivered unless major changes in planning.		
2.3 How well are outputs achieved?				
	A	All outputs have been and most likely will be delivered as scheduled with good quality contributing to outcomes as planned.		
x	B	Output delivery is and will most likely be according to plan, but there is room for improvement in terms of quality, coverage and timing.		
	C	Some output are/will be not delivered on time or with good quality. Adjustments are necessary.		
	D	Quality and delivery of outputs has and most likely will have serious deficiencies. Major adjustments are needed to ensure that at least the key outputs are delivered on time.		

3. EFFECTIVENESS TO DATE: Degree to which the outcome (Specific Objective) is achieved as planned at the end of year N				
<i>In order to calculate the total score for this quality criterion, proceed as follows: 'At least one 'A', no 'C' or 'D' = A; Two times 'B' = B; At least one 'C', no 'D' = C; at least one 'D' = D</i>				
Assessment EFFECTIVENESS: total score	A	B	C	D
	x			
3.1 As presently implemented what is the likelihood of the outcome to be achieved?				
	A	Full achievement of the outcome is likely in terms of quality and coverage. Negative effects (if any) have been mitigated.		
x	B	Outcome will be achieved with minor limitations; negative effects (if any) have not caused much harm.		
	C	Outcome will be achieved only partially among others because of negative effects to which management was not able to fully adapt. Corrective measures have to be taken to improve ability to achieve outcome.		
	D	The intervention will not achieve its outcome unless major, fundamental measures are taken.		
3.2 Are activities and outputs adapted (when needed), in order to achieve the outcome?				
x	A	The intervention is successful in adapting its strategies / activities and outputs to changing external conditions in order to achieve the outcome. Risks and assumptions are managed in a proactive manner.		
	B	The intervention is relatively successful in adapting its strategies to changing external conditions in order to achieve its outcome. Risks management is rather passive.		
	C	The intervention has not entirely succeeded in adapting its strategies to changing external conditions in a timely or adequate manner. Risk management has been rather static. An important change in strategies is necessary in order to ensure the intervention can achieve its outcome.		
	D	The intervention has failed to respond to changing external conditions, risks were insufficiently managed. Major changes are needed to attain the outcome.		

4. POTENTIAL SUSTAINABILITY: The degree of likelihood to maintain and reproduce the benefits of an intervention in the long run (beyond the implementation period of the intervention).				
<i>In order to calculate the total score for this quality criterion, proceed as follows: At least 3 'A's, no 'C' or 'D' = A; Maximum two 'C's, no 'D' = B; At least three 'C's, no 'D' = C; At least one 'D' = D</i>				
Assessment POTENTIAL SUSTAINABILITY: total score	A	B	C	D
		x		
4.1 Financial/economic viability?				
	A	Financial/economic sustainability is potentially very good: costs for services and maintenance are covered or affordable; external factors will not change that.		
x	B	Financial/economic sustainability is likely to be good, but problems might arise namely from changing external economic factors.		
	C	Problems need to be addressed regarding financial sustainability either in terms of institutional or target groups costs or changing economic context.		
	D	Financial/economic sustainability is very questionable unless major changes are made.		
4.2 What is the level of ownership of the intervention by target groups and will it continue after the end of external support?				
	A	The steering committee and other relevant local structures are strongly involved in all stages of implementation and are committed to continue producing and using results.		
x	B	Implementation is based in a good part on the steering committee and other relevant local structures, which are also somewhat involved in decision-making. Likelihood of sustainability is good, but there is room for improvement.		
	C	The intervention uses mainly ad-hoc arrangements and the steering committee and other relevant local structures to ensure sustainability. Continued results are not guaranteed. Corrective measures are needed.		
	D	The intervention depends completely on ad-hoc structures with no prospect of sustainability. Fundamental changes are needed to enable sustainability.		
4.3 What is the level of policy support provided and the degree of interaction between intervention and policy level?				
	A	Policy and institutions have been highly supportive of intervention and will continue to be so.		
x	B	Policy and policy enforcing institutions have been generally supportive, or at least have not hindered the intervention, and are likely to continue to be so.		
	C	Intervention sustainability is limited due to lack of policy support. Corrective measures are needed.		
	D	Policies have been and likely will be in contradiction with the intervention. Fundamental changes needed to make intervention sustainable.		
4.4 How well is the intervention contributing to institutional and management capacity?				
	A	Intervention is embedded in institutional structures and has contributed to improve the institutional and management capacity (even if this is not an explicit goal).		
x	B	Intervention management is well embedded in institutional structures and has somewhat contributed to capacity building. Additional expertise might be required. Improvements in order to guarantee sustainability are possible.		
	C	Intervention relies too much on ad-hoc structures instead of institutions; capacity building has not been sufficient to fully ensure sustainability. Corrective measures are needed.		
	D	Intervention is relying on ad hoc and capacity transfer to existing institutions, which could guarantee sustainability, is unlikely unless fundamental changes are undertaken.		

10.2 Updated Logical framework

The logical framework was updated in view of:

1. The recommendations of the midterm review 2019 – including the proposed project extension.
2. The non-approval of the value financing grant that was proposed in the TFF
3. The lack of an appropriate legal framework for Enabel project to support the private sector.
4. The adoption of sunflower as a third value chain.
5. The shift from private investments to public infrastructure notably the construction of bridges for improving access to markets.
6. Making targets more realistic in function of the developments on the ground notably the market dynamics of the cassava value chain and the limited absorption capacity of smallholder producer groups.
7. The data cleaning and the need to align the improved procedures of the annual household surveys.

The changes made are listed in the table below:

Indicator	Revised (remarks)	New	Any other Remarks
Indicator 10.1a: % increase in smallholders income derived from Cassava	Target was revised downwards due to structural market slump of Cassava	No	NA
Indicator 10.1b: % increase in smallholders income derived from Beans	NA	No	Sharp increase (from 6% in 2019 to 20%) due to increase bean market prices. If prices are anticipated to remain high, we may need to adjust target
Indicator 10.1c: % increase in smallholders income derived from Sunflower	NA	Yes	NA
Indicator 10.2a: Total value of Cassava traded by smallholder beneficiaries [Billion TZS] cumulative	Original denominator used current # of beneficiaries regardless of year of interest. Now based on # of beneficiaries in the target year. Target revised downwards to 40 (billion TZS)	No	NA
Indicator 10.2b: Total value of Beans traded by smallholder beneficiaries [Billion TZS] cumulative	Original denominator used current # of beneficiaries regardless of year of interest. Now based on # of beneficiaries in the target year. Target revised downwards to 25 (billion TZS)	No	NA
Indicator 10.2c: Total value of Sunflower traded by smallholder beneficiaries [Billion TZS] cumulative	NA	Yes	NA
Indicator 11.1a: % of farmers perceiving their cassava buyers as trustful business partners	Revised downwards from 75% to 30% due to structural market slump of cassava. Currently at 6%.	No	Recently introduced intervention of crop aggregation financing seen as a catalyst for improved perception in the final two years (from current 6% to endline target of 30%.
Indicator 11.1b: % of farmers perceiving their beans buyers as trustful business partners	Revised downward from 75% to 50%. Currently at 13%.	No	Recently introduced intervention of crop aggregation financing seen as a catalyst for improved perception in the final two years (from current 13% to endline target of 50%.
Indicator 11.1c: % of farmers perceiving their sunflower buyers as trustful business partners	NA	Yes	NA
Indicator 11.2b: % of traders perceiving their bean farmers as reliable suppliers	Revised upwards from 75% to 85%.	No	NA
Indicator 11.2c: % of processors perceiving their sunflower farmers as reliable suppliers	NA	Yes	NA
Indicator 12.1a: % of smallholder beneficiaries with access to informal agricultural finance	Revised downwards from 50% to 35%. Currently at 29%	No	NA
Indicator 12.1b: % of smallholder beneficiaries with access to formal agricultural finance	Revised downwards from 25% to 10%. Currently at 0%	No	Due to the non-approval of the value chain financing grant, change accreditable to project's efforts in terms of formal agricultural finance are expected to be significantly lower.

Indicator I2.2a: Value of loans provided to AMCOS under guarantee fund [Billions TZS]	NA	Yes	NA
Indicator I2.2b: Value of loans provided to crop traders and processors under guarantee fund [Billions TZS]	NA	Yes	NA
Indicator I2.3a: % of participating traders with access to formal finance	Revised downwards from 80% to 75%. Currently at 29%	No	Recently introduced intervention of credit guarantee financing seen as a catalyst for improved access to formal financing in the final two years
Indicator I2.3b: % of participating small scale agro-processors with access to formal finance	NA	Yes	NA
Indicator I2.4a: % repayment of revolving loans for agricultural inputs	NA	Yes	NA
Indicator I2.4b: % repayment rate of loans provided under guarantee fund	NA	Yes	NA
Indicator I2.5a: Cost reduction achieved through construction of stone arch bridges	NA	Yes	NA
Indicator I2.5b: % local resource mobilization for construction of bridge infrastructure	NA	Yes	NA
Indicator I3.4: % of farmers in participating wards with access to farming as a business (FAAB) service	NA	Yes	NA
Indicator I3.5: % of farmers satisfied with the quality of farming as a business service	NA	Yes	NA
Indicator I4.1a: Smallholder gross margin per hectare of cassava (TZS)	Revised downwards from 1,300,000 TZS to 680,000 TZS. Currently at 267,000 TZS	No	Structural market slump of Cassava the main factor behind the downward adjustment.
Indicator I4.1b: Smallholder gross margin per hectare of beans (TZS)	Revised downwards from 950,000 TZS to 300,000 TZS. Currently at 191,000 TZS.	No	NA
Indicator I4.1c: Smallholder gross margin per hectare of sunflower [grain] (TZS)	NA	Yes	NA
Indicator I4.2a: % adoption of cassava improved GAP by smallholder beneficiaries	Revised downwards from 60% to 40%. Currently at 30%	No	Due to the decrease in demand and consequent price slump, technology adoption efforts are expected to be lower.
Indicator I4.2c: % adoption of sunflower improved GAP by smallholder beneficiaries	NA	Yes	NA
Indicator I4.3a: Yield of dried cassava [MT/Ha]	Revised downwards from 6 to 4. Currently at 2.9	No	Less incentive to apply GAP with the decrease in demand and consequent price slump
Indicator I4.3b: Yield of beans [kg/Ha]	Revised downwards from 1200 to 700kg. Currently at 536 kg	No	Yields seem to have stagnated over the past 2 years.
Indicator I4.3c: Yield of sunflower [kg/Ha]	NA	Yes	NA
Indicator I4.4a: % of smallholder beneficiaries engaging in collective marketing of cassava	Revised downwards from 25% to 10%. Currently at 6%		Due to the decrease in demand and consequent price slump, efforts in collective marketing may be negatively affected
Indicator I4.4b: % of smallholder beneficiaries engaging in collective marketing of beans	Revised upwards from 20% to 25%	NA	NA
Indicator I4.4c: % of smallholder beneficiaries engaging in collective marketing of sunflower among participating sunflower producers	NA	Yes	NA
Indicator I4.5: % of sunflower farmers adding value through processing	NA	Yes	NA
Indicator I4.6: % of farmer groups transitioning to professional organizations	Revised downwards from 60% to 50%. Currently at 34%		With the strategy of dropping non-performing groups, 50% seems feasible
Indicator I4.7: Number of producers involved in contract farming	Revised downwards from 3,000 to 2,000. Currently at 993 producers.	No	Targets are reduced as to be more realistic and achievable. Proposed changes are in line with observed trends and additional boost of sunflower contract farmers while avoiding double counting of those already in bean structured marketing
Indicator I5.1a: % smallholder producer groups participating in structured cassava market relationships	Revised downwards from 60% to 10%. Currently at 3%	No	Due to the decrease in demand and consequent price slump, efforts in forming structured cassava market relationships may be negatively affected. Produce aggregation financing intervention should catalyse more involvement in structured relationships
Indicator I5.1b: % smallholder producer groups participating in structured bean market relationships	Revised downwards from 50% to 25%. Currently at 13%		Produce aggregation financing intervention should catalyse more involvement in structured relationships
Indicator I5.1c: % smallholder producer groups participating in structured sunflower market relationships	NA	Yes	NA
Indicator I5.2a: Value of cassava sold through structured marketing by smallholder producers (cumulative Million TZS)	Revised downwards from 8,000 to 200.	No	NA
Indicator I5.2b: Value of beans sold through structured marketing by smallholder producers (cumulative Million TZS)	Revised downwards from 4,000 to 1,600. Currently at 1,051	No	NA
Indicator I5.2c: Value of sunflower sold through structured marketing by smallholder producers (cumulative Million TZS)	NA	Yes	NA
Indicator I5.3a: % increase in sales (TZS) by local cassava traders	Revised downwards from 50% to 30%. Currently at 0% (baseline level of sales)	No	Produce aggregation financing assumed to have a positive impact on this indicator.
Indicator I5.3b: % increase in sales by local bean traders	Revised upwards from 50% to 80%. Currently at 87%	No	NA
Indicator I5.4a: % farmers accessing objective sources of cassava market information	Reviewed downwards from 75% to 50%. Currently at 29%.	No	NA
Indicator I5.4b: % farmers accessing objective sources of bean market information	Reviewed downwards from 75% to 50%. Currently at 30%.	No	NA
Indicator I5.4c: % farmers accessing objective sources of sunflower market information	NA	Yes	NA
Indicator I5.5a: % of SME reporting benefits from business association membership	NA	Yes	NA
Indicator I5.5b: % of SME reporting benefits from sunflower processor association membership	NA	Yes	NA
Indicator I5.6a: % reduction of transport costs to the nearest weekly market where bridges have been built.	NA	Yes	NA
Indicator I5.6b: % traffic increase by motorcycles and cars during the weekly market days	NA	Yes	NA
Indicator I5.6c: # bridges with assured all season river crossing for vehicles where bridges are earmarked for construction	NA	Yes	NA
Indicator I5.7a: % population that reports that the bridge benefits their household in those villages where bridges are completed	NA	Yes	NA
Indicator I5.7b: % population that reports that the bridge benefits their village in those villages where bridges are completed	NA	Yes	NA

10.3 Summary of More Results

Logical framework's results or indicators modified in last 12 months?	Yes: indicators were reviewed
Baseline Report registered on PIT?	Baseline report was posted on PIT and Go-fast. There are annual household survey reports posted on PIT
MTR (registration of report)	2019-Q3
Planning ETR (registration of report)	Originally planned for 2021-Q2. However, based on MTR 2019, the steering committee recommended the no cost extension of the project period. The proposed date for the ETR will be extended with that period
Backstopping missions since	backstopping missions: 2016 – theory of change 2017-Q2 2019-10 – review MTR recommendations 2020-02: backstopping finance & administration for UBW and accounts closure, no further backstopping missions due to Covid

10.4 Communication resources

Extension materials (Kiswahili)

- Posters - cassava mosaic virus & brown streak virus (reprinted with permission CRS)
- Leaflets cassava mosaic virus & brown streak virus (reprinted with permission CRS)
- Cassava cultivation (adapted from the original Meda brochure)
- Manual on cassava cultivation + Manual on bean cultivation
- Manual farming as a business
- Gender training manual for lead farmers and extension workers.
- Brochure on the construction of stone arch bridges for village governments
- Manual on Proper seed dressing
- Yield assessment Manual
- Leaflets on cassava processing

Radio clips (Kiswahili)

Bean field days, Nanenane shows, liming for soil fertility, aggregation

Video clips (Kiswahili)

SAKIRP introduction, Bean production and marketing module, Cassava production and marketing module, Stone arch bridge construction, Farmer Field Days + Nanenane Exhibition

Tools

- Diagnostic tools for the assessment of farmer and partner organisations
- Questionnaires for market surveys of beans and cassava
- Written tests and interview questions for the selection of technical advisers
- Kobo toolbox for data collection and performance monitoring of field workers
- Training manual Kiswahili – farming as a business
- Quick survey priority ranking rural markets
- Map Kigoma region
- Template assessment sites proposed for bridge construction
- MoU with village for bridge construction
- Annual Household surveys + bimonthly beneficiary tracking
- Construction manual stone arch bridges – Kiswahili
- Assessment template: eligibility criteria for AMCOS
- CPI tool for diagnostic farmer organisations

Reports

- Value chain assessment beans in Kigoma region
- Value chain assessment cassava in Kigoma region
- Market study: cassava Burundi & Uganda / Rwanda

- Market study: beans in Tanzania
- Household baseline survey Kigoma region 2017
- Household survey Kigoma region 2018
- Quick scan of cassava pest and diseases 2017 & 2018
- Value chain financing assessment for cassava and beans in Kigoma region
- Credit preparedness in Kigoma region
- Evaluation of cassava graters in Kigoma region
- Midterm review report October 2019
- Sunflower marketing study 2020
- Nyakitonto infrastructure market study 2021

Technical specifications

- TORs of high quality were developed for the value chain assessment and the market surveys of beans and cassava.
- Criteria for selection of lead farmers.
- Construction stone arch bridges – BOQs, specifications, drawings