



Sustainable Agriculture Kigoma Regional Project

SAKIRP - Annual Results Report 2019

Tanzania



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1 Acronyms

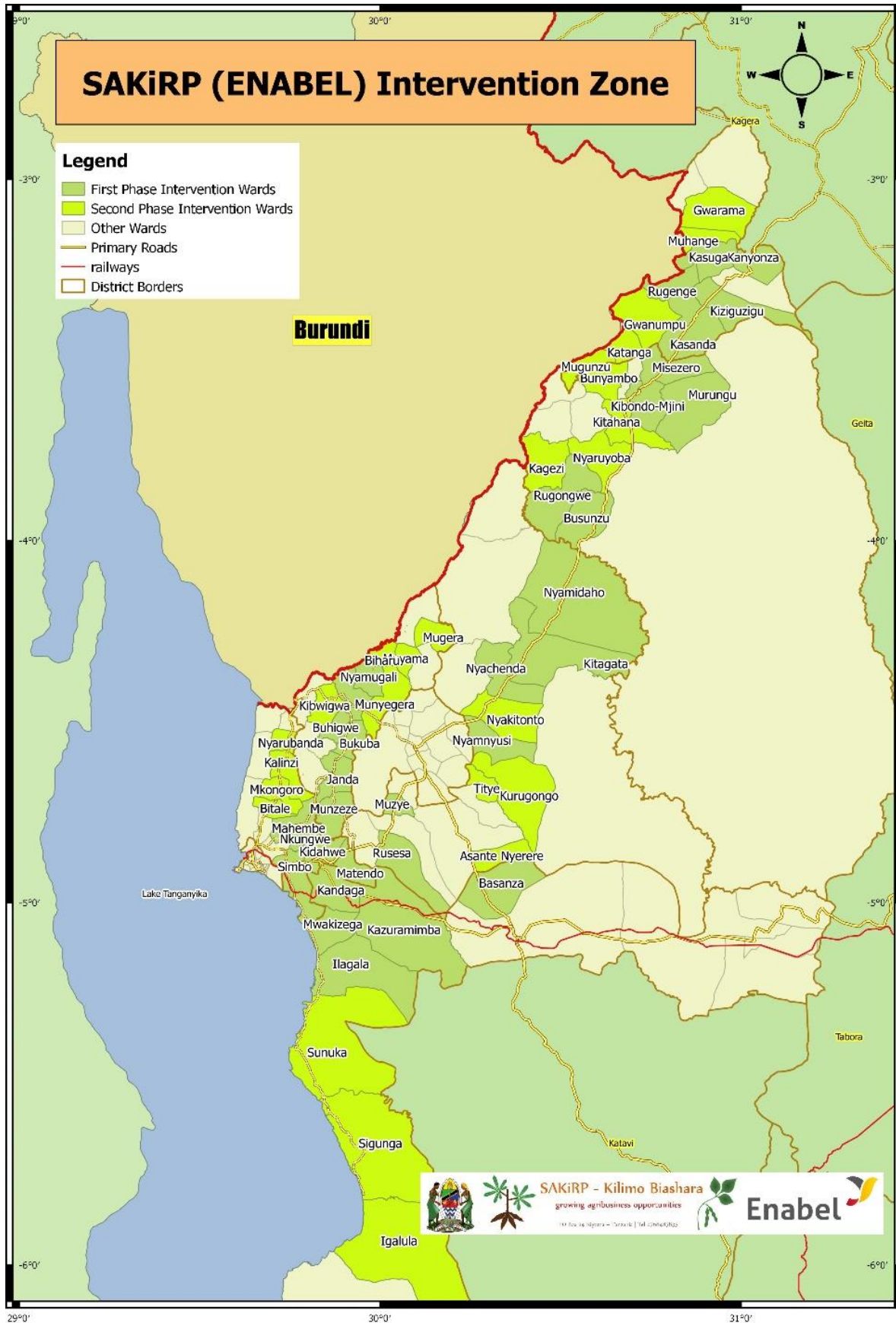
AAS	Assistant Administrative Secretary
AFM	Administration and Financial Manual
AFO	Administration and Financial Officer
AGRA	Association for Green Revolution in Africa
AIDS	Acquired Immunes Deficiency Development Syndrome
AMCOS	Agricultural Marketing Cooperative Society
ANO	Announcement of No Objection
ARDS	Agricultural Routine Data System Tz
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
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
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

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
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
SM	Structured marketing
SME	Small and medium enterprises
TAFSIP	Tanzanian Agriculture and Food Security Investment plan
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
VCA	Value Chain Assessment
VCF	Value Chain Finance
VICOBA	Village Community Bank
WAEO	Ward Agricultural Extension Officer
WEO	Ward Executive Officer
WRS	Warehouse Receipt System

2 Intervention at a glance

2.1 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
End date Specific Agreement	24/11/2021
Target groups	Direct beneficiaries: smallholder farmers, especially women and other chain actors of cassava & 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 2019



2.2 Self-assessment performance

2.2.1 Relevance

	Performance ¹ Self-assessment	Performance Midterm review
Relevance	A	B

Cassava and beans are important crops cultivated and traded in large volumes by most farmers in Kigoma region. Value chain development to alleviate poverty and boost economic growth remains high on the national and regional agenda. The Tanzanian government emphasises value addition in the agricultural sector through local processing to spur industrialisation. With the absence of DASIP, local governments in Kigoma Region perceive this project as central to smallholder agriculture development and increasing crop cess revenue. Tackling the production node bottlenecks increased the project's relevance considering the low productivity currently prevailing in the region.

Feedback from project partners and the midterm review indicate that the overall intervention logic remains valid and consistent. However, some fundamental assumptions of the formulation did not fully materialize:

- In Kigoma region, both value chains are dominated by the informal sector with limited scope for growth and capacity to uplift smallholder agriculture. In cassava trade, there are no lead firms. In beans, the few formal firms withdrew because of low productivity, narrow margins and a difficult business environment. Both crops have only limited opportunities for value addition in Kigoma region.
- Huge gaps in value chain financing persist for smallholder farmers. The lack of practical Enabel modalities for microfinance/ private sector support, limits the project's strategic options and relevance.
- Beans contributed to the income and cash flow of rural households but the crop is very vulnerable to adverse weather conditions induced by climate change.
- Due to the price slump of cassava, this crop is not profitable. Contrary to the market dynamics during the formulation, conditions are not favourable for the trade expansion and income improvement in the cassava value chain. Moreover, CBSV devastated a lot of fields while disease tolerant varieties are not yet available on a large scale.
- The assumption of free trade in East Africa is challenged by the developments on the ground. The political situation in Burundi remains volatile and will influence the trading patterns with its neighbours. In Kigoma, the transit trade of cassava through Burundi to Rwanda was suspended thereby affecting trade flows and increasing costs for sourcing from Kigoma. On the other hand, Kigoma benefited from more trading with Rwanda especially for maize after closure of the Uganda / Rwanda border.
- The TFF assumption that farmer field schools will be the building block for dynamic farmer organisations is contradicted by the reality on the ground. The project made an inventory of the best performing groups and VICOBAS emerged as the best albeit the small scale of their operations. A flexible and more diverse approach was opted for in function of the most dynamic groups.
- For equity reasons, the technical and financial file emphasises the empowerment of farmer groups and collective marketing. The government is on a drive to revive the dysfunctional cooperative system. In addition, formal agricultural commodity firms also have a strong interest in having well-organised smallholder farmers in order to reduce transaction costs. 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 and trading risks. The long-term sustainability of the smallholder collective marketing system remains in doubt and would require more time to build and sustain.
- Given the institutional anchoring of the project within the regional government, there is a strong pull towards the local government authorities and a "direct implementation" style; whereas a value chain advocates a facilitation role with more reliance on market dynamics and a competitive private sector to drive value chain transformation.
- The Belgian cooperation policy puts emphasis on private sector engagement and the role of Belgian firms. In the context of Tanzania, Kigoma has a largely informal private sector with limited resource and management capacity. The only Belgian firm engaged, Casibean, pulled out in 2019 due to sourcing challenges linked to low productivity.

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

1.1.1 Efficiency

	Performance Self-assessment	Performance Midterm review
Efficiency	B	C

The MTR had a mixed assessment of the efficiency of SAKIRP. The project has met many challenges meaning efficiency cannot be considered optimal, but it should be underlined that most challenges are beyond the team's control. Indeed, the low level of spending and the delays which the project has encountered are largely due to initial problems in relation to project identification and formulation (MTR report 2019).

Factors that reduced efficiency

1. The non-availability of suitable Enabel modalities to support micro finance services and partner with the banking sector is the biggest setbacks for an efficient project implementation. The project management has explored the procurement regulations to the limits in order to try to achieve results. But in the end, the PIU has no control over the legal Enabel operating framework.
2. The ineptness of the private sector investment innovation fund: Enabel does not have the legal mandate to support directly the private sector. Medium-scale commercial farmers would be able to co-fund investments and create economies of scale in terms of input supply and commodity aggregation: smallholder producer groups are generally failing to meet market requirements.
3. The absence of producer organisations that can mobilise a large membership and the fragmented trade of cassava and beans mean that there are no economies of scale for value chain development. The VC development work is therefore slow and transaction costs are high.
4. The opportunities for better collaboration between agricultural projects in Kigoma have not been fully realised. The aim is to get economies of scale and reduce administrative costs. Unfortunately, major agricultural projects focus on the same crops. With the current situation, the implementation modalities are structured to avoid overlap than pooling resources.
5. Some districts lobbied a lot for the expansion to remote wards or wards without competent agricultural extension workers. While additional assistance is required in such wards, the efficiency is low when the agricultural department cannot provide effective supervision given the long distances and inadequate staffing.
6. The quality of cassava cuttings remains a challenge. Certified commercial seed entrepreneurs (CSEs) supplied cuttings from fields that were infected. SAKIRP had to recall all cuttings from some batches, destroy them and order again. The official seed agency TOSCI does not have the resources to ensure the quality of QDS seeds in the vast area of Western Tanzania. The large amounts of cuttings that are moved between regions increase the risk of spreading brown streak virus and other diseases if no quality controls are imposed. The efficiency of the logistics of getting cutting supplies from ARI Maruku needs to be improved so that planting material is available on time and with good vigour.
7. The relative remoteness of Kigoma region comes inherently with increased cost of project implementation.

Factors that contributed to efficiency:

1. The cost efficiency of project procurement is good – prices are aligned with market prices. SAKIRP has shared administrative staff and office space with other Enabel projects in Kigoma (water, natural resources): this generates cost efficiencies.
2. The mobile data management allows for more efficient data collection, two-way communication and better performance monitoring of extension staff.
3. The 2 cluster offices are operational and allow for a closer follow-up at grassroots level and improved communication with VC stakeholders. The fact that offices are provided by the Kigoma Regional Secretariat; as well as by the respective district councils in Kakonko and Kasulu; is a mechanism for limiting project costs. It also offers opportunities for networking with local government authorities² and collaboration with other agricultural projects (MTR report 2019).
4. The SAKIRP team has proven flexible and undertaken many judicious adjustments such as reorienting the project towards production, reorienting the investment innovation fund towards public infrastructure and subsequently arch stone bridges, promoting district cluster offices, developing

stronger collaboration with local governments, introducing a junior M& E assistant within the team, or deciding to base part of its team outside Kigoma in Kibondo and Kakonko so as to strengthen ties with the field and facilitate monitoring of village and district activities (MTR report 2019).

5. Collaboration with local authorities, particularly the use of WAEOs to provide extension support to farmer groups, must be commended as it minimises project costs. In this sense, equipping WAEOs with extension gear, motorcycles, smartphones for mobile monitoring and data collection should be underlined for significantly improving SAKIRP's outreach (MTR report 2019).
6. The Enabel direct management has proven efficient. The cost efficiency of project procurement is good and there is general agreement that working through the Tanzanian administration would have been much more time consuming (MTR report 2019).

1.1.3 Effectiveness

	Performance Self-assessment	Performance assessment Midterm review
Effectiveness	B	B

Despite the constraints listed in previous sections, the MTR expects that SAKIRP is in the process of attaining significant results:

Result	Achievements / observations
1. Value chain coordination	<ul style="list-style-type: none"> • SAKIRP has developed an efficient mobile data collection and analysis system integrated in the LG extension service. It provides, market information and WhatsApp platforms for WAEOs and traders. • High quality studies of the bean & cassava value chains and the domestic and export markets. • Bean & cassava VC remain highly informal. The VC coordination is difficult in the absence of a lead private sector firm.
2. Value chain financing	<ul style="list-style-type: none"> • The non-approval of the proposed financing grant facility had a knock-on effect on SMEs' aggregation capacities and farmers' ability to access loans for input financing. To deal with the challenge, the project has put in place an in-kind loan scheme which directly provides farmers with improved seed and fertiliser on credit. About 40.000 euro were provided for producer group input revolving funds. The recovery of these loans through structured commodity sales averaged 51%. The low direct recovery rate is linked to the challenge of low productivity which sees farmers produce below break-even volume. This in-kind scheme is, thus, risky and does not offer opportunities for scaling up. • The business innovation fund was transformed into a "access to markets" infrastructure fund. 12 bridges have been built and 8 are under advanced construction. It is anticipated that the target of 50 bridges will be exceeded as the fund is very popular with local governments. The strong stone arch bridge technology allows for the mobilisation of local resources and provides a cost saving of 80% compared to reinforced concrete bridges.
3. Value chain support services	<ul style="list-style-type: none"> • SAKIRP facilitated the ward extension workers in 56 wards and monitors the performance. About 14.000 farmers are covered. 68% of project beneficiaries are women. Farmers report 85% satisfaction rate of the local government extension services supported by SAKIRP. • SAKIRP trained and facilitated a pool of 14 ward "farming as a business" coaches that is more and more specialised in aggregation, quality and bean marketing.
4. Strengthening production & producer groups	<ul style="list-style-type: none"> • Based on the Capacity Performance Index (CPI) the capacity of the groups has improved. There are about 52 groups in highest level (up from 39 in 2018) and that have moved beyond the stage of being merely an association expecting government and donor subsidies. • Improved 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. • Better performing bean and cassava varieties were selected on farm for further multiplication by producer groups. In total there are 321 demos and

	<p>367 seed multiplication plots.</p> <ul style="list-style-type: none"> • SAKIRP introduced double tolerant cassava varieties in Kigoma region to deal with the brown streak virus outbreak. However, to make an impact the scale of multiplication needs to be stepped up drastically. • Beneficiary farmers report a satisfaction rate of 94% of the lead farmers supported by SAKIRP. • Introduction of better bean varieties. At farm level, bean quality can be drastically improved to export quality provided supervision and price incentives are in place. Farmers report an income improvement from beans but a loss from cassava.
5. Markets and trade	<ul style="list-style-type: none"> • SAKIRP has linked cassava farmer groups in Kibondo and Kakonko to BRIMA, a cassava processing company. However due to the low prices this linkage has not grown in scale. • SAKIRP linked 396 farmers to GAFCO to produce 200 tons of beans. Unfortunately, GAFCO went bankrupt due to a high cost business model, difficulties with crop insurance and side-selling by smallholder farmers. • SAKIRP has brokered a relationship between 12 farmer groups, representing 195 producers and a Belgian company, Casibbeans. Unfortunately, the company pulled out of Kigoma citing low production volumes by smallholders and unreliable quality. • Signed MoU with the Tanzania Chamber of Commerce, Industry and Agriculture (TCCIA) to build the capacity of crop traders and processors in cross-border trade. TCCIA has undertaken visits to Burundi and DRC to identify export opportunities • 14 aggregation and buying centres have been set up and supplied with post-harvest management equipment to improve bean quality • 17 SME entrepreneurs (crop traders and processors, mostly in both beans and cassava) have formed a business membership network to foster collaboration and coordination within the value chains. Plans to formalise this network are underway with support from TCCIA

2.2.2 Potential sustainability

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

Economic sustainability

Improved agricultural practices appear to be well received by producers and, as previously explained, it appears likely that increases in agricultural production will be maintained and will develop further both across producers and in size in the long run. It should, however, be noted that limited access to capital will most likely mean that such effects will take longer to fully materialise.

The profitable export opportunities of cassava in Burundi and Rwanda were related to temporary events (the outbreak of cassava brown streak virus and political instability) in those countries. The situation has now changed and both countries have regained self-sufficiency and the cassava trade with Kigoma has dropped significantly as a result. The current price slump of cassava is structural and diversification of marketing channels and crops are a necessary risk mitigation strategy. The productivity levels in Kigoma are still too low and undermine price competitiveness on the export market. The profitability of the current smallholder farming methods depends on expanding the acreage by further cutting the last patches of miombo forest and increased soil degradation. More sustainable farming methods are required including the use of fertilizer, pest and erosion control.

Profit margins for beans sold under structured marketing arrangements are narrow and are highly sensitive to production yields. Increasing yields is central to economic sustainability of structured marketing arrangements. Meanwhile, climate change is taking a heavy toll on the profitability of bean production. Yield losses of >75% are common. The promotion of sunflower crop cultivation and will increase the climate change resilience and reduce the need for heavy investments in agrochemical inputs.

Post-harvest losses for beans are still high, in the range of 30% to 50%. Often linked to adverse weather conditions, post-harvest losses reduce the throughput from production to marketing and affect the profitability of bean farming. For bean production and trading to be sustainable, reasonable margins must be ensured for all actors to sustain and scale up structured marketing arrangements. In terms of processing, the cassava value addition potential appears limited and most experiences to date seem unsustainable. When considering any processing equipment, it is preferable to ensure beneficiary commitment through a significant degree of local contribution. The leasing system set up to enable producer groups or SMEs to test equipment only guarantees appropriation and sustainability once satisfied groups start paying for the equipment in instalments. For the moment, groups are still in the testing period and have not committed to buy any equipment.

The construction of stone arch bridges also offers strong perspectives of sustainability. The simple technology has proven to be sustainable over the ages. In addition, the strong involvement of local communities and of the Tanzania Rural and Urban Road Authority (TARURA) means that bridge maintenance is likely to be good over the long run. Finally, the creation of a pool of local masons with expertise in stone arch building, along with the low cost of the technology and the strong level of contribution of beneficiaries towards building material implies that bridge building is likely to continue beyond the SAKiRP timeframe. Several districts have visited Kigoma to understudy the technology.

The Kigoma regional context is dominated by refugee relief services and many aid agencies are targeting the same implementing partners and beneficiaries. Consequently, and because of the humanitarian aid situation, there is a risk that hard commercial requirements for investments and capacity building will be compromised by the prevailing preference for subsidies and free hand-outs.

As the micro finance grant was not approved, SAKiRP shifted to an in-kind revolving fund for inputs as a stopgap measure in absence of an optimal and market-friendly solution. The sustainability of revolving in-kind loans hinges on the organisational capacity of smallholder savings groups and their continued access to structured marketing opportunities. Its commercial scalability depends on successful buy-in and roll-over of roles to financial service providers and agribusiness firms.

Ownership and capacity building

SAKiRP has closely 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, TARURA, TCCIA and SIDO should be in a better position to continue supporting cassava and bean value chain development beyond the project timeframe.

To avoid donor dependency, the starting point was to work with existing producer groups that have a track record on the ground and not to create specific project related groups. A lot of efforts are invested in the capacity building of producer groups, extension workers and lead farmers. These efforts foster local ownership and post-project sustainability. The new umbrella AMCOS are important for the trading with WFP and the economies of scale in the value chain. However, these AMCOS pose a risk to sustainability as their management capacity and system of accountability are still not well-developed.

Ownership by the private sector (farmers, aggregators, processors and international firms) in structured bean market linkages is a sustainability factor which is still being developed. 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.

The SAKIRP principles of alignment with market dynamics and local contribution are important tools to enhance ownership, improve communication and identify core priorities. Examples are the on-farm demo & seed multiplication plots, aggregation of bean produce, grater technology, storage facilities and bridges that require the mobilisation of locally available resources. Community contribution has, however, slowed down the implementation and increased the need for closer monitoring.

Policy support

The government agricultural policy strategies aim at job creation, intensification of agriculture, commercialisation of smallholder farms, value addition and the promotion of agricultural commodities as raw materials for the industrialisation drive and the creation of mixed crops AMCOS to create economies of scale. Nevertheless, recent sudden changes in policy with more emphasis on price controls of fertilizer & produce, food export regulation, marketing through cooperative unions and general protectionist tendencies have made an impact on the private investment that is needed to achieve the set agricultural development objectives. Given its geographical position, economic growth opportunities of Kigoma rely strongly on the export business with East African countries. Free trade principles foster that trade. SAKIRP only has a linkage to the Ministry of Agriculture through the steering committee. It is hoped that regular agricultural sector coordination meetings will provide a platform for policy dialogue.



The midterm review pointed out that the ambitious government agricultural policy documents do not seem to be supported by corresponding local investments. Demonstrating political commitment through financial investments towards the creation of a conducive environment for value chain development would undoubtedly represent an important contribution to the sustainability of all value chain support efforts in Tanzania.

Contribution to institutional and management capacity

SAKIRP has been a key player in improving the performance of local government extension services. The capacity improvement of the extension workers will be sustained after the closure of the project. The government recommends that 20% of the crop cess is used to fund the operational cost (that are now supported by SAKIRP). The mobile phone information system (and Kobo toolbox) appears quite manageable by local authorities and is currently being transferred to be used for the Local Government agricultural data collection. In order to sustain the mobile data collection a stronger alignment with LG data requirements is required. TARURA is supporting the appropriate technology of stone arch bridges. The agency has been keen to promote the technology at international workshops and in the Road Boards.

2.3 Conclusions.

1. The project SAKIRP is on track to achieve results 1 (value chain coordination – monitoring & evaluation), result 3 (provision of effective value chain services). It is moderately on track to achieve result 4 and 5. The absence of producer organisations that can mobilise a large membership and the fragmented trade of cassava and beans mean that there are generally no economies of scale to make a regional wide impact on poverty alleviation. The absorption capacity of most smallholder producer groups is limited.
2. The achievement of result 2 is threatened and limited by the lack of appropriate legal framework for Enabel. The current Enabel grant and procurement modalities are inadequate for private sector value chain support. The cross-cutting and crucial importance of access to capital which supports value chain development throughout all VC segments: input acquisition, investment in production equipment, investment in post-harvest management processes, running costs and trade treasury is paramount. The rejection of the value chain financing facility has significantly affected the development of the value chain and aggregation capacity. Enabel needs to urgently to obtain the legal mandate and devise a set of private sector support tools including micro-finance in order to be coherent with the present emphasis put on support to private enterprise.
3. In order to increase the access to agricultural markets and trading hubs, SAKIRP has systematically built stone arch bridges with the committed village governments and the dynamic TARURA district offices. The stone arch bridge component is very popular because of the strength of the bridges, the reliance on local resources and the 80% construction cost saving. It will remain one of the lasting legacies of Enabel in Kigoma Region. Other districts and agencies are understudying the technology.
4. The adoption of sunflower as a third value chain is a necessary action which will mitigate current risks and contribute to increasing smallholders' income. Cassava has been going through a structural price slump for the last 2 years. The crop is further threatened by cassava brown streak virus. The income from cassava production is negative. Local bean prices are good, but bean production is highly vulnerable to the adverse weather patterns. In order to effectively contribute to the income improvement of smallholder farmers, the steering committee approved sunflower as a third value chain. Sunflower is more resilient to climate change, it fits well in the crop rotation, production costs are low, opportunities for value addition and collaboration with local private sector are better while marketing risks are limited.
5. There is a need to consider VC support over the long term so as to have time to boost production and generate tradable volumes of products, strengthen producer organisation (so as to ensure a regular offer) and product marketing, whilst having enough time to address inevitable changes in VC context (variations in prices, demand...). The midterm review, steering committee and local stakeholders requested therefore to extend the project with another 1.5 years in order to consolidate the experience of value chain development of cassava and beans, fully exploit the value addition and income generating opportunities of the third value chain (sunflower) and expand the access to markets / bridge component. The MTR recommended an additional phase with an ambitious farmer organisation sector strengthening strategy.
6. To increase the sustainability of marketing arrangements for connecting smallholders to markets, it is necessary to promote cohesion of local crop traders alongside the preferred option of building stronger farmer organisations. Reliance on farmer organisations to the exclusion of local private traders is not consistent with the value chain development principle of market facilitation and tends to crowd out the private sector which should own and drive chain development.
7. The biggest bottleneck to value chain development and market integration for smallholder farmers is low productivity. While production is widespread, it is not adequately concentrated to make the realised volumes commercially viable for large-scale buyers. Thus, the project's structured marketing linkages must aim at generating volume scale and not geographical outreach.

National execution official	Enabel execution official
 Joseph Rubuye SAKIRP project coordinator Regional Agricultural Adviser	 Steven Hollevoet SAKIRP project manager

3 Results Monitoring³

3.1 Evolution of the context

3.1.1 General and institutional context

The Tanzanian government agricultural policy aims at job creation, intensification of agriculture, commercialisation of smallholder farms, 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. Nevertheless, recent sudden changes in policy with more emphasis on price controls of fertilizer & produce, food export regulation, marketing through cooperative unions and general protectionist tendencies have made an impact on the private investment that is needed to achieve the set agricultural development objectives. Given its distant geographical position from the main markets in Tanzania, economic growth opportunities of Kigoma rely strongly on the export business with East African countries.

The presence of refugees continues to attract humanitarian assistance and international attention. The latter has led to a proliferation of loosely connected but related interventions thereby posing a coordination challenge and market distortion. The governments of Tanzania and Burundi agreed to enhanced voluntary repatriation and a general backing for the refugee camps closure. With the closure of the markets in the camps, neighbouring farmers lost an important outlet especially for cassava and maize.

The 2018-19 season was too dry; while the 2019-20 *masika* season faced excessive rains and flooding. These adverse weather conditions have reduced bean and maize production. The lower production, together with the lifting of the government food export ban contributed to better crop prices in general. The border closure between Rwanda and Uganda, led to more Rwandese traders coming to Kigoma for the purchase of maize and cassava. Unpredictable weather had a direct impact on the SAKIRP facilitated bean contract farming.

The recovery of cassava production in Rwanda and Burundi triggered a decline in prices of both fresh and dried cassava in Kigoma. This has led to a marked 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. It was even detected in officially certified commercial cutting multiplication plots.

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. The government bulk procurement of fertilizer continued and helped to offer DAP and urea at reasonable prices.

In Nov 2019, the local village elections were organised without the participation of the opposition parties. For 2-3 months, the village elections delayed the construction of bridges as there was a leadership vacuum, the executive was fully occupied by the organisation of the elections and sometimes the bridges became a contentious issue because of electioneering.

³ Impact refers to global objective, Outcome refers to specific objective, output refers to expected result

3.1.2 Management context

3.1.2.1 Partnership modalities

There have been no major changes in the partnership modalities. SAKIRP is anchored in the Ministry of Agriculture for the coordination of technical issues at national level. The project is supervised by the steering committee composed of the 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 Agricultural Market Development Trust (AMDT) became an active member of the steering committee. AMDT comes with an agribusiness background and mandate.

The project implementation unit is anchored in the Kigoma Regional Secretariat. This is relevant for a bilateral project and offers opportunities for networking with local government authorities and the collaboration with new agricultural projects. The Project Coordinator is the regional agricultural adviser with a clear mandate for coordination of agriculture-related activities. In the districts, the DFP is responsible for coordinating activities of extension staff and has direct oversight from the DED. The major partner of a value chain project is the private sector. The private sector is, unfortunately, very informal and hardly organised in Kigoma region. SAKIRP participates as a member in the regional business council facilitated by LIC. With the access to markets / bridge construction component, the collaboration with the Tanzania Rural and Urban Roads Agency became important in 2019.

3.1.2.2 Operational modalities

The technical team is very committed and remained in place. The challenge is at the level of ward agricultural extension workers. With the employment stop, it is not possible to replace non-performing WAEOs. Many district agricultural offices struggle with a human resource constraint. The midterm review assessed the project and important recommendations were made: focus on a limited number of producer groups, extend the project period as value chain development takes time, continue to support production especially the seed sector, continue to support local government extension).

SAKIRP follows the financial management and procurement regulations of the Belgian partner (*regie* management). Project staff has been familiarised with those procedures. The project is using a cashless financial system based on Mpesa, in addition to the internet Banking system. The introduction of the new financial management tool UBW struggled with quite some hurdles. The audit 2018 outlined minor problems (sometimes no fiscalised receipts, on some invoices no withholding tax was paid). The project financial turnover stands at 40% for 70% of the implementation period.

No amendment of the project Implementation Manual was done. There was an important turn-over of finance and administrative staff that is also shared with the Enabel water project.

A new Enabel resident representative started working in Tanzania in September 2019.

3.2 Performance outcome

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



3.2.1 Progress of indicators

Specific Objective: Smallholders income is increased and diversified in Kigoma region, especially for women, through pro-poor value chains development								
INDICATORS	Project Baseline		Overall Target	2018		2019		2020
	Date	Value		Actual	Target	Actual	Target	Target
10.1a - % Increase in smallholders' total income derived from cassava	2017	0%	25%	1%	5%	-17%	10%	25%
MALE		0%		6%				
FEMALE		0%		-4%				
10.1b - % Increase in smallholders' total income derived from beans	2017	0%	30%	8%	10%	6%	20%	30%
MALE		0%		10%				
FEMALE		0%		8%				
10.2a - Added value in cassava by smallholders [Billion TZS]	2017 - 2018	4	45	10	10	8	20	45
MALE		1		3				
FEMALE		3		7				
10.2b - Added value in beans by smallholders [Billion TZS]	2017 - 2018	4	45	12	15	6	35	45
MALE		1		4				
FEMALE		3		8				

3.2.2 Analysis of progress made

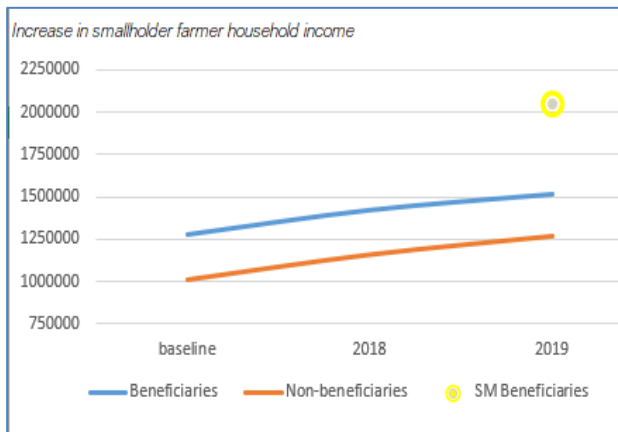
Analysis of progress made towards outcome:	
<p><i>Relation between outputs and the Outcome. (How) Are outputs (still) contributing to the achievement of the outcome:</i></p>	<ul style="list-style-type: none"> Result 1: Traders still express a good level of trust in farmers. On the other hand, the producers' confidence has dropped due to low cassava prices and the continued role of agents in both value chains. The mobile data management M&E system allowed for better data and supervision of field staffs. Result 2: Value chain financing & support to the private sector did not materialise as planned. SAKIRP had to revert to inefficient and distortive in-kind input loans with high risks. Important opportunities for the scaling up of good agronomic practices and trade were missed as a consequence. Smallholders remain dependant on informal financial sources for credit. Result 3: The SAKIRP assistance enabled local government authorities to have better extension services. 91% of beneficiary farmers appreciate the

Analysis of progress made towards outcome:	
	<p>services rendered by ward extension workers and 85% of services provided by the lead farmers. Nevertheless, the performance of individual extension workers can be improved, and more can be achieved given the modest level of technology adoption.</p> <ul style="list-style-type: none"> • Result 4: Strengthening producer groups and productivity has had a modest contribution to the income of smallholder farmers. Producer groups are not able to take up the essential functions of aggregation financing, quality control, risk mitigation and logistics to have a direct trading relationship with large buyers. SAKIRP has been working hard on these essential tasks with 66 producer groups. Bean income has increased because of yield improvements, (due adoption of good agronomic practices), higher prices & increased production. The technology adoption in the bean value chain is 37% and in cassava 20 %. Cassava production increased but could not make up for the price slump. The opportunities for value addition through cassava processing remain very limited in Kigoma. Low productivity remains a key bottleneck to competitiveness of local farmers nationally and internationally. Further improving yields is key to the viability of both value chains in Kigoma. • Result 5: The momentum of market linkages dipped due to the withdrawal of lead firms such as GAFCO and Casibbeans in the bean value chain. Currently a pilot with WFP is under way but contractual requirements are tight for smallholder producer groups. Collective sales are curtailed by lack of aggregation credit and the predominance of informal traders in both value chains.
<i>Progress made towards the achievement of the outcome (on the basis of indicators):</i>	<p>The 6% income increase from beans was substantial in a year with adverse weather conditions which drastically lowered yields. Recovering bean prices in the second semester of 2019 somehow offset for the depressed production. Albeit the production increase, there was a -17% income reduction from cassava due to the structural price slump.</p> <p>The total value of beans and cassava traded by smallholder farmers remained well below project targets. Based on developments on the ground, the targets set for the specific objective are not achievable.</p> <p>By the end of 2019, about 14.000 smallholder farmers have been reached – amongst them are 68% women.</p>
<i>Issues that arose, influencing factors (positive or negative):</i>	<ul style="list-style-type: none"> • Non-approval of the value chain financing grant facility with knock-on effects on other result areas. • Cassava price slump due to production recovery in Rwanda and Burundi. • Pull-out of bean lead firm (after GAFCO also Casibbeans) due to the difficult business context and competition from the informal sector in Kigoma. • Unfavourable weather conditions (not enough rain in 2019-Q1 and too much rain in 2019-Q4) reduced bean production and the ability to recover in kind input loans. • To make a tangible contribution to smallholders' income, the sunflower value chain will be piloted in 2020 to deal with overall lack of value addition opportunities, cassava price slump and climate change vulnerability of beans.
<i>Unexpected results:</i>	<ul style="list-style-type: none"> • Local demand for bean varieties targeted for export has been quicker than anticipated. This put price pressure on buyers. • The stone arch bridge construction component enjoys strong support and appreciation local government authorities.

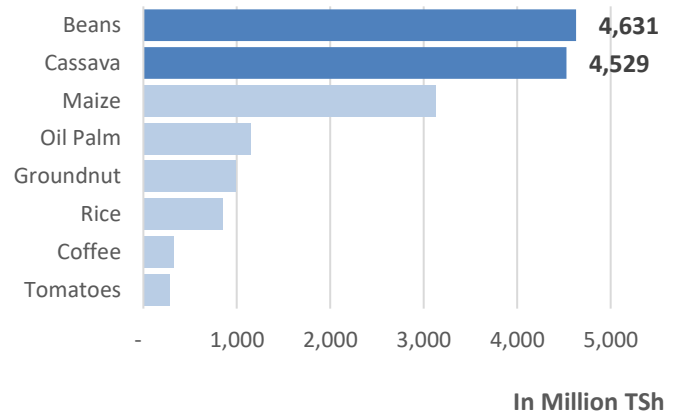
Progress made towards the achievement of the outcome (on the basis of indicators):

Overall income

During the past 2 years, the income of smallholder beneficiaries working with SAKIRP has increased considerably at an average rate of 10%, per annum which however is equally valid for non-beneficiaries. In 2019, the yearly global household income amounted to 1,273,000 Tsh, 1,520,000 Tsh and 2,056,000 Tsh for non-beneficiaries, beneficiaries and beneficiaries involved in bean 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 numerous governmental or non-governmental interventions with overlapping target groups and activities. Direct attribution is therefore not applicable in this case, as the control group might have received other treatments.



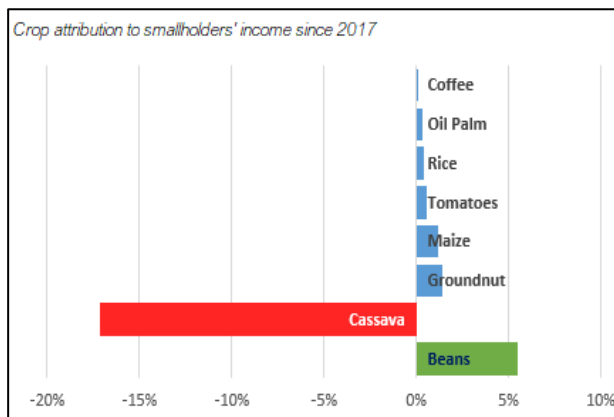
Source: SAKIRP HH survey 2019



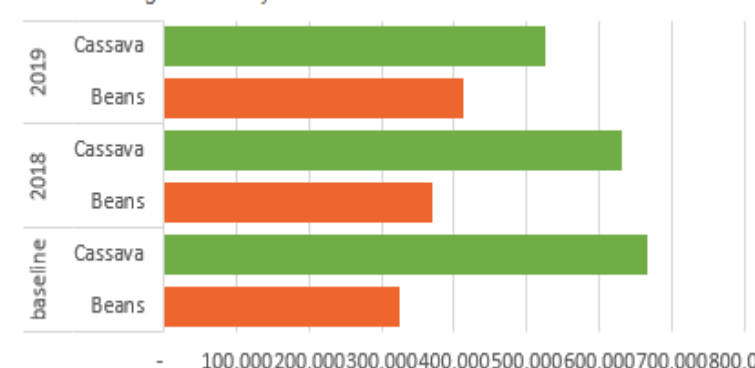
In Million TSH

Income from beans and cassava

Market trends for cassava and beans have evolved in opposite directions. Cassava suffered a structural price slump due to the recovery of production in Rwanda and Burundi resulting in decreased demand for cassava sourced from Kigoma. On the other hand, the last two years have seen bean prices trending upwards leading to significant income gains at household level.



Trend in average beneficiary household income derived from beans and cassava



Although the value of cassava marketed by smallholder families is significantly higher (almost 35% higher) than that of beans; marketing beans has contributed to a much higher degree to the increase in income observed over the last 2 years. Despite the slump in cassava prices, the 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.

3.2.3 Potential Impact

The midterm review identified the following potential impact of SAKIRP beyond its lifespan:

1. Increased production of beans and cassava.
2. Improved rural road network because of the stone arch bridge construction. Enabel's approach to building bridges, based on a simple aged old technique which can be transferred to local populations will contribute to create local craftsmanship capacities for the future. The bridges will improve access to markets and consequently reduce transportation costs, thus contributing to a conducive environment for VC
3. 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.
4. The commodity aggregation and structured market linkages are in their initial stages and will need to be consolidated and scaled up for them to have a significant and sustainable effect on beneficiaries

The SAKIRP experience will also contribute to:

- The demonstration of the strengths and weaknesses of the value chain development concept for smallholder farming in a remote region.
- The introduction of Kobo-toolbox set an example of mobile data collection and 2-way communication to improve the management of agricultural departments.
- Farming as a business training and the accompanying technical interventions will orientate both beans value chains towards commercial farming and competitiveness.

The midterm review believes that the value chain development goals set in TFF are not achievable in a 5 years period and that a second phase is required.

The absence of producer organisations that can mobilise a large membership and the fragmented trade of cassava and beans means that the potential impact of SAKIRP is reduced. The VC development work is therefore iterative and transaction costs are high. The steering committee approved the MTR recommendation to avoid expanding outreach and focus on consolidating the emerging results. Thus, the project must prioritize quality has priority over quantity. SAKIRP will focus on the best performing groups (about 17% of 600 groups working with SAKIRP). In 2019, about 14.000 farmers have been reached. The ultimate target of 20.000 farmers was abandoned.

The non-availability of modalities to support micro finance and the private sector has considerably curtailed the potential impact of the project. It had a knock-on effect on SMEs' aggregation capacities and farmers' ability to access loans for input financing. In the meantime, as a matter of risk mitigation policy, VisionFund has scaled down on its portfolio allocation to smallholder lending to a maximum of 25%.

3.3 Performance output 1: value chain coordination.



3.3.1 Progress of indicators

Result 1: VC management & coordination mechanisms are installed & steer VCD								
INDICATORS	Project Baseline		Overall Target	2018		2019		2020
	Date	Value		Actual	Target	Actual	Target	Target
11.1a - % of farmers reporting/perceiving cassava buyers as trustful business partners	2017-2018	24%	50%	28%	30%	14%	40%	50%
MALE		27%		26%		17%		
FEMALE		22%		30%		12%		
11.1b - % of farmers reporting/perceiving bean buyers as trustful business partners	2017-2018	24%	50%	27%	30%	13%	40%	50%
MALE		25%		28%		15%		
FEMALE		24%		27%		11%		
11.2a - % of trader reporting/perceiving cassava farmers as reliable suppliers	-	-	75%	100%	25%	82%	50%	75%
11.2b - % of trader reporting/perceiving beans farmers as reliable suppliers	-	-	75%	100%	25%	82%	50%	75%

3.3.2 Progress of main activities

Progress of main activities	A ¹	B	C	D
2. M&E & capitalization framework for VCD are elaborated				
Midterm review		X		
Monitoring by region		X		
Conduct annual household survey		X		
Develop monitoring matrix and data collection tools		X		
-Train agricultural extension officers on data collection and M&E		X		
Periodic data collection, analysis and progress tracking.		X		
Pilot Integration of Mobile data collection into ARDS			X	
3. Forums for enhancing VC management & coordination are conducted				
Establish innovation platforms			X	
Regional stakeholders meeting		X		
District coordination meetings agriculture		X		
Project steering committee		X		
4. Project capitalisation products are produced & disseminated				
Develop capitalization products and channels for use of mass media (radio, video, website, brochure etc.)		X		

3.3.3 Analysis of progress made

Indicator assessment

11.1a - % of farmers reporting/perceiving cassava buyers as trustful business partners	This indicator dropped from 28% in 2018 to 14% in 2019 due to the structural market slump of cassava. Farmers perceive the price of 120-150 Tsh/kg as not compensating them for their work and investments for an entire season. However, traders are exposed to the same low prices in Burundi and pass them on to the farmers. Only delayed harvesting and storage will improve the prices. These matters were discussed during cassava stakeholders meeting and the situation between traders and farmers was defused. Chinese markets are no alternative.
11.1b - % of farmers reporting/perceiving bean buyers as trustful business partners	This indicator dropped from 27% in 2018 to 13% in 2019. The problem is the need for an intermediate firm / agent that can deal with the logistics of aggregation, permits and export. VICOBA farmers groups are only to a very limited extent able to deal with this level of organisation. In the season 2019-2020, AMCOS were set up to deal directly with WFP, but again the logistics remain a challenge.
11.2a - % of trader reporting/perceiving cassava farmers as reliable suppliers	This indicator dropped to 82% but is still satisfactory. It differs starkly from the assessment by the farmers pointing to an asymmetric trade relationship.
11.2b - % of trader reporting/perceiving beans farmers as reliable suppliers	This indicator dropped to 82% but is still satisfactory. It differs from the assessment by the farmers pointing to an asymmetric trade relationship.

Value chain coordination

SAKIRP value chain coordination has focused on a robust M&E system and mobile data collection. Because of the informal character of the cassava and bean value chain and the absence of a lead firm, value coordination was limited to organising 6 district agricultural coordination meetings. Due to the slump in cassava price and the call for government market regulation, SAKIRP in collaboration with the regional and district authorities organised to 2 district cassava stakeholders' meetings to discuss the problems of price development, direct access of producer groups to foreign traders and cost of doing business including taxation. The majority of the issues were referred to the regional business council. The SAKIRP regional stakeholders' meetings have been organised twice a year and they bring together all the important actors of the cassava and bean value chain.

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. Data sources	sample	Data collected / application	Data collection Tools used
2. Network ward extension workers	62	monthly activity monitoring, indicator progress tracking, logistical planning, capacity building, learning	Kobo toolbox, QGIS WhatsApp
3. Trader network	13	Market information: price, quantity, demands for beans & cassava	WhatsApp groups Direct phone calls
4. Bimonthly beneficiary tracking	1400	Agricultural data cassava & beans, market, production costs, technology adoption	Kobo toolbox,
5. Annual HH survey	1800	Agricultural, market, credit, HH income, technology adoption, progress	Kobo toolbox, Call backs

Data sources	sample	Data collected / application	Data collection Tools used
6. Lead farmer network – planned 2020	535	Demo and multiplication plot performance, activity monitoring groups, market data	SMS platform
7. Capacity Performance Index producer groups	535	Accountability, professionalism executive, income diversification, strategic potential, participation, production management, marketing, advocacy	Kobo toolbox, CPI methodology
8. Piloting GoTz agricultural routine data system ARDS in Kigoma district	16	Agricultural data for the ministry of Agriculture	Kobo toolbox, ARDS WhatsApp groups

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 building and much more.



- 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

The positive experiences with technology-enabled M&E system are being scaled up. In Kigoma district, SAKIRP is piloting the mobile data collection for the Agriculture Routine System (ARDS). This is a web-based portal for reporting, analysis and dissemination of data for agriculture used by Ministry of Agriculture, Livestock and Fisheries in Tanzania. The aim of the pilot is that extension officers submit the data by Kobo toolbox so that the tedious and error bound paper form-based system can be phased out. The M&E team continues to train district agricultural staff on data collection, validation, IT applications and data analysis.

The Kigoma Regional Commissioner monitored the SAKIRP activities in June 2019 and was satisfied with the grassroots extension and infrastructure support. The Belgian Ambassador visited the Enabel cluster projects in Kigoma in July 2019 to get a feedback on the ground of Belgian development cooperation. The regional monitoring team conducted twice field visits to all districts.

Capitalisation

The MTR exercise (May 2019) was an important moment of reflection for Enabel as an organisation. Apart from project specific recommendations, there were also valuable lessons learnt for value chain approach and the Enabel modalities required to support the private sector. The M&E unit produce several radio broadcasts (crop field days, post-harvest management beans, gender, cassava) and 3 video documentary modules. bean brochure, leaflet village government bridge construction. The manual of stone arch bridges was translated into Kiswahili.

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

3.4.1 Progress of indicators

The implementation of this result has been significantly held back by the lack of appropriate tools for improving access to finance by farmers and private sector actors in targeted value chains. As a result, the project has been forced to divert from best practices thereby assuming the role of credit provision which should be assumed by banks and microfinance institutions. Interim mechanisms adopted by the project expose it to excessive risk which threatens the sustainability such interventions as structured marketing and adoption of modern production technologies.

Given the Enabel limitations to support the private sector, the value chain investment fund was transformed into a fund for access to markets for the construction of bridges. This component has become very successful in terms of addressing critical rural road infrastructure constraints, local resource mobilisation and developing a sustainable cost model in collaboration with the Tanzanian Rural and Urban Roads Agency - TARURA.

Result 2: Financial mechanisms are developed & financial organizations are strengthened to support VCD								
INDICATORS	Project Baseline		Overall Target	2018		2019		2020
	Date	Value		Actual	Target	Actual	Target	Target
I2.1 - % of smallholders' beneficiaries with access to agricultural finance by gender	2017-2018	2%	25%	3%	5%	24 ⁴ %	15%	25%
<i>MALE</i>		3%		4%		24%		
<i>FEMALE</i>		2%		1%		24%		
I2.2 - % of groups with access to agricultural finance	2017	1%	25%	-	10%	23%	20%	25%
I2.3 - % of participating traders with access to agricultural finance	2017	30%	80%	-	40%	29%	60%	80%
I2.4 - % of participating farmer groups with access to improved storage facilities	2017	0	10%	-	0%	11%	0%	10%
I2.5 - % of participating local traders utilising improved market/storage infrastructure	2017	0	25%	58%	0%	11 ⁵ %	0%	25%
I2.6 - % of defaulters (calculated from those who accessed loan)	2017	-	<5%	-	<5%	0%	<5%	<5%
(i) - Number of participating traders accessed loan	2017	5	24	-	10	4	15	0
I2.4 - % of participating farmer groups with access to storage facilities	2017	0	10%	-	5%%	11%	10%%	10%

⁴ This is the % of farmers who access loans through VICOBA groups

⁵ This is the number of farmers who benefitted from

Indicator	Explanatory comments
I2.1a - % of smallholder beneficiaries with access to <u>informal</u> agricultural finance by gender	The primary source of credit for smallholder farmers are the informal savings and lending groups (VICOBA). Agricultural financing is broadly defined to refer to both informal and informal forms of financing.
I2.1b - % of smallholder beneficiaries with access to <u>formal</u> agricultural finance by gender	Formal agricultural finance refers to loans from banks. Over the past year, none of the supported farmers managed to access formal loans. This is mostly due to lack of required collateral and high risk associated with food crop farming
I2.2 - % of participating farmer groups with access to agricultural finance	In this category we include the farmers who received in-kind loans. This a semi-formal arrangement which does not indicate progress in accessing market-based finance. It is nevertheless aimed improving both access to formal and informal financing
I2.3 - % of participating traders with access to agricultural finance	While traders are accessing some loans from banks, the loans are too small for their needs due to a lack adequate collateral
I2.4 - % of participating farmer groups with access to storage facilities	Under structured markets, SAKIRP has improved the facilities of existing storage structures to have fully operational aggregation centres. These cover 11% of the participating groups.

3.4.2 Progress of main activities

Planned activities ⁶	Progress status			
	A	B	C	D
Improving financial products & services by banks and improving access to finance by VC actors				
Provide in-kind input loans		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	

3.4.3 Analysis of progress made

The major activities under this result area have been the installation of financing mechanisms to increase the availability of credit to chain farmers and direct infrastructural investments to increase farm to market access. Increasing access to credit to farmers was mainly pursued through the in-kind agricultural loan input scheme which was run over the course of two seasons with a combined outlay of €32.000 and a reach of 344 farmers within 21 producer groups across 2 districts. The construction of stone arch bridges linking smallholder production areas and commodity trading hubs has picked momentum in 3 districts with a total of **12** bridges completed and 8 being constructed in 2019. The veto on the Vision Fund grant made the promotion of service linkages impossible. As SAKIRP was not able to collaborate with financial service providers (FSP) with a practical collateral fund, the activity of providing technical advice did not materialize. SAKIRP had no leverage to advise FSP on the development and adaption products to meet needs of actors in the cassava and bean value chain.

⁶ A = The activities are ahead of schedule

B = The activities are on schedule

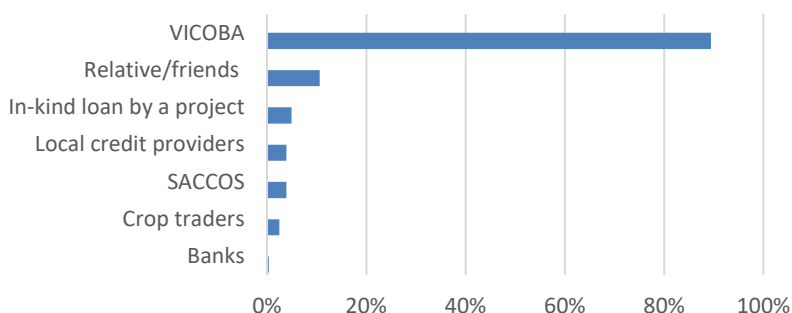
C = The activities are delayed, corrective measures are required

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

Overall agricultural credit access situation

The recently concluded beneficiary follow-up survey shows that VICOBA groups remain the predominant source of loans for smallholder producers. As much as **89%** of beneficiary smallholders applied for loans through the VICOBA system. Comparing to the baseline of 2017, not much has changed, apart from in-kind loans made available by the project in 2018-2019.

Figure 1: Sources of credit for smallholder farmers



The credit, mainly accessed through VICOBA groups, is increasingly channelled to agricultural input financing. **56%** of the loans applied for were partially or fully assigned to agricultural input sourcing, compared to **46%** in 2017. **58%** of the agricultural credit is invested in bean and cassava production, **36%** and **22%** per crop respectively.

Pilot: input revolving fund for groups

The project faced a stalemate when the Vision Fund grant mechanism to increase farmers' credit access was rejected by the DGD. To deal with the resultant challenge, in 2019, the project piloted the provision of production credit to smallholder farmers through an in-kind revolving loan mechanism. The revolving in-kind loan scheme saw the project purchase required agricultural inputs and loan them to farmers who repaid upon collective selling of beans. Funds recovered through in-kind loan repayments are reinvested into the same groups to constitute an agribusiness loan fund which is run alongside the group's internal saving and lending activities.

Through the in-kind loan scheme, a total of 344 farmers accessed bean seed, fertilisers and agrochemicals on credit. The total value of such in-kind input loans stood at 80 million Tanzanian shillings (€32,000). 52% of these loans were recovered through deductions made on income generated from bean sales and the remainder remained as outstanding that farmers had to repay through other income sources. Out of the 21 groups that were supported with in-kind input loans only 5 (24%) managed to clear their debts. The following table shows the total size of loans provided to farmers during the 2018/2019 agricultural season and the level of loan recovery attained. The amount of unrecovered loans has since come down 35 million shillings as a result of farmers drawing on other sources of income to clear loans associated with structured bean production and marketing.

Analysis of the in-kind loan performance

The performance of the in-kind loan varied between groups and individual farmers. The common trend was that farmers were not able to deliver enough quantities of beans to cover the cost of inputs. Delivered quantities were generally below break-even volume and this was a result of low yields and post-harvest losses. It is evident that, without increasing productivity of beans, the risk of providing agricultural credit to smallholder farmers remains too high. High weather variability resulting from climate change increase the chances of crop failure, makes it difficult to coordinate production and renders post-harvest quality management complex. This SAKIRP experience is similar to other smallholder loan arrangements. In 2018, the private firm GAFCO went bankrupt because of unrecovered smallholder loans. The lesson learnt was that with current levels of farm management and weather risks, loans are further indebting smallholder farmers.

Lessons from the pilot phase of the in-kind credit pilot

The two phases of the in-kind credit scheme yielded some insights and lessons which informed the project strategy for the 2019/2020 farming season. The main lessons that emerged from the pilot phase are summarised below:

- The provision of loans to smallholder farmers must be highly selective. The loan selection criteria must be enforced at both group and individual farmer level. The inclusion of uncreditworthy individual farmers will undermine loan repayment and affect the performance of the whole group.
- Any loan support must be done on the back of proven agronomic performance and readiness to produce at the required productivity levels. Farmers that have not mastered good agricultural practices must not be given loans to produce for the market
- The project must not be perceived to be the credit provider as this leads to opportunistic behaviour and negatively and adversely impacts loan repayment. Development projects are widely perceived as sources of subsidies.
- Any loans to farmers must be backed by multiple forms of collateral which should be enforced to avoid setting bad precedents.
- Provision of loans to support in-kind credit must be completed with adequate arrangements for pre-financing aggregation. Lack of pre-financing prejudices loan recovery as farmers under-deliver and side-sell produce
- Peer monitoring of farmers must be strengthened alongside continuous efforts to educate farmers about the importance honouring credit obligations.

In-kind input credit for the 2019/2020 season

Despite the poor performance of the pilot phase of the in-kind credit scheme, the project built on lessons gained to roll out a much bigger phase of in-kind input loans. The total value of the in-kind loans amounted to 270 million shillings (€108.000). This expanded roll out of the in-kind input credit was made in consideration of the following factors:

- The willingness of WFP to be a market off-taker for beans to be produced and the structured production arrangement
- The variety of bean seeds required (red kidney and Lyamungo varieties) is not readily available through the normal seed supply system hence the need for to intermediate.
- Lack of market-based alternatives for providing production credit to farmers

The size of investment in in-kind input credit loans increased more than three-fold from €32.000 in the 2018/2019 season to €108.000 in the 2019/2020 season.

Implications for the future of value chain financing

Based on the in-kind input loan pilot run, the provision of production credit to smallholder farmers remains a high-risk proposition for lenders. With the risks still so high, development projects like SAKIRP need to concentrate on de-risking the production process by coaching farmers to improve their agronomic practices, manage climate change risks and increase their productivity. To increase the chances of smallholder farmers getting loans from banks, it is imperative to install risk-sharing mechanisms that will mitigate bank exposure. In this context and with its recent strong focus on private sector support, The predominance of village savings and lending groups (VICOBA) as sources of credit for smallholder farmers implies that these community-based organisations must be kept at the centre future project strategies and efforts. Increased capital base and credit management capabilities of savings and lending groups will enhance the sustainability of credit provision whilst keeping the cost of borrowing within the farmer's reach. To ensure adequate support to village savings and lending groups, the project has engaged a technical specialist in microfinance and credit.

Planned actions for strengthening credit provision to smallholder farmers

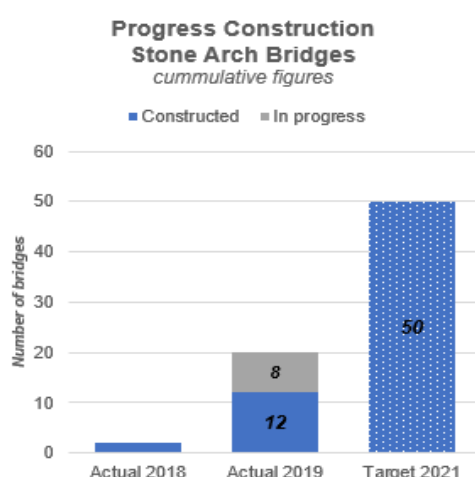
- The project is working on a proposal to co-guarantee the provision of loans to smallholder producer groups and crop traders through a call for grants.
- Mobilisation of high-potential SAKIRP-supported farmer groups into AMCOS to build economies of scale and facilitate linkages to formal credit sources
- Providing intensive training and coaching on savings and lending to groups that received in-kind input credit. The objective of these capacity building efforts is to protect and grow the invested funds to strengthen community-based value chain financing

- Sharing of experiences and lessons with the mainstream credit institutions (banks and microfinance institutions)

Direct investment in public infrastructure “Access to markets”.

Construction of bridges

Given the incompatibility of the business innovation fund with the Enabel legal framework, the fund was transformed into a co-matching fund to support access to market by constructing bridges in collaboration with village communities. This SAKIRP component “access to markets” has become very popular amongst the local government and the regional authorities. The community demand for bridge construction is overwhelming. The stone arch bridges are a strong technology that rely on local resources, present considerable costs savings (80%) and offer the village governments the opportunity to develop their own road network. In 2019, 12 bridges were completed and 8 have been under construction. More than 80 potential bridge sites have been surveyed. It is clear that the target of 50 bridges will be exceeded.



Highlights stone arch bridge construction

- cost reduction of the construction costs: 80%
- based on a case study analysis:
 - reduction transport cost per 100 kg bag: 50%
 - traffic density increase during market days: 60-120%
- households reporting to benefit directly from bridge in wards where bridges are constructed: 97%
- households reporting increased agri-business opportunities 28% and better transport services 28% in wards where bridges are constructed
- local resource mobilisation for bridge construction: 15-20%

Source: enumerator call back survey Feb 2020

The participation of the Tanzania TARURA district offices differs; with some district managers enthusiastically embracing the concept. TARURA Kigoma DC has presented the stone arch bridge technology at several engineering workshops. Delegations from TARURA headquarters and districts came to understudy the technology in Kigoma. 16 masons have been trained on the job but only 4 have been able so far to handle construction contracts independently. Other constraints are the slow mobilisation of stones, the backfilling of bridges after construction, flooding and interrupted cement supply. 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.

Storage facilities for crop aggregation

Despite the high expectations during the formulation, the construction of warehouses has not taken off. The interest of producer groups and the capacity to raise the local contribution is limited. Many existing village and primary society godowns remain unused. Only 2 producer groups requested assistance for go-downs. On the other hand, the interest of traders in storage is considerable especially with the cassava price slump. However, Enabel cannot support the private sector directly. Most dried cassava is stored for 2-3 months under tarpaulins or the cassava harvest is simply delayed. In 2020, there is a proposal to fund the storage construction of one AMCOS that clusters several producer groups.

3.5 Performance output 3: chain supporters render effective services.

The focus of this result area is on mobilising and developing the capacity of value chain services to farmers, processors and traders. Chain supporters working with the project fall into two main categories: public service providers and private service providers. Local government agricultural extension departments are the major public service partner working with the project to mobilise and technically support farmers. The private service providers have been mainly engaged through consultancy service agreements to provide service on specific requirements. In-between these categories are organisations with a quasi-public mandate. The project has entered into MoU agreements with such organisations (SIDO and TCCIA) to strengthen collaboration and service delivery on a cost-recovery basis.

3.5.1 Progress of indicators

Result 3: Public and private chain supporters provide functional services to value chains actors								
INDICATORS	Project Baseline		Overall Target	2018		2019		2020
	Date	Value		Target	Actual	Target	Actual	Target
13.1 - % of farmers reporting to have received useful government extension services	2017	50%	90%	70%	83%	80%	91%	90%
<i>MALE</i>	2017	60%	90%	70%	81%	80%	97%	90%
<i>FEMALE</i>	2017	40%	90%	70%	85%	80%	86%	90%
13.2 - % of farmers reporting to have received useful agronomic support from their lead farmers	2018	71%	85%	75%	74%	80%	94%	85%
<i>MALE</i>	2018	75%	85%	75%	76%	80%	94%	85%
<i>FEMALE</i>	2018	65%	85%	75%	72%	80%	94%	85%
13.3 - % of traders satisfied with business development support services	2017	0%	80%	80%	100%	80%	92%	80%

3.5.2 Progress of main activities

Planned activities	Progress			
	A	B	C	D
Conduct Training of trainers on Farming as business for new ward extension officers			X	
Training and deployment of Farming as a Business providers		X		
Gender mainstreaming based on midterm review recommendations		X		
Refresher trainings local government extension staff (extension, diseases, seed systems)		X		
Supervision on-the-job coaching for Local government authority extension staff by PIU team		X		
Integrated Pest Management for beans - Field training ward extension officers		X		
Post-harvest management - bean quality - field based		X		
Agricultural annual ward shows	X			
Personal demo ward extension officers			X	
Monthly on-the-job support		X		
Equipping DFPs and ward extension workers with working & transport gear- laptops		X		
Monitoring by Local government & DC of SAKIRP activities		X		
Quarterly District focal person meetings		X		

3.5.3 Analysis of progress made

13.1 - % of farmers reporting to have received useful government extension services	This indicator improved further from the baseline 50% > 83% (2018) > 91% (2019). The number of useful services increased as well from 2.2 baseline figure to 3.3 (2018) to 5.6 (2019). The heavy investment in capacity building and performance monitoring of WAEOs by SAKIRP improved the extension service delivery. 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 improved further from the baseline 50% > 94% in 2019. Female farmers systematically reported a higher number of useful services (12 versus 7 for male farmers) An in-depth analysis is made in the narrative text.
13.3 - % of traders satisfied with business development support services	92% of the traders reported to be satisfied with the BDS services. This is a drop from 100% in 2018.

The following service providers have been relied upon during project implementation:

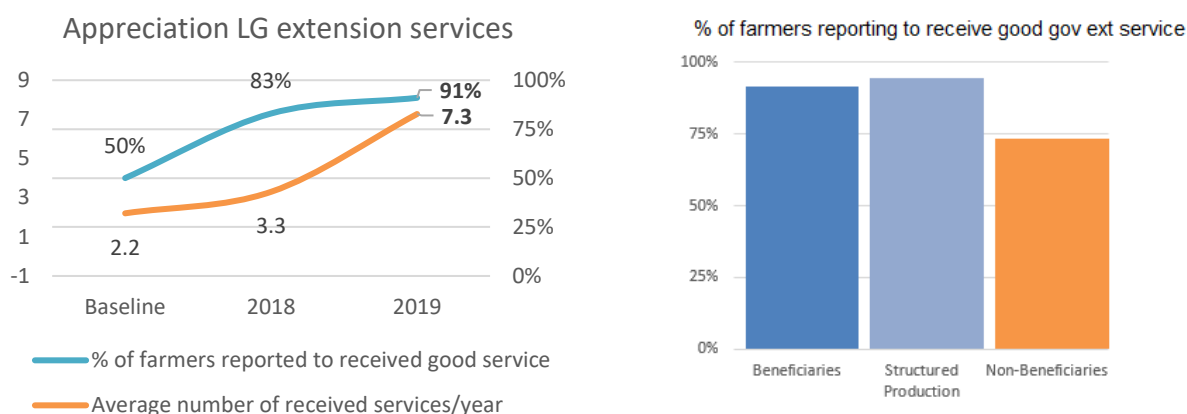
Service provider	Area of expertise	Located Kigoma	involvement
SIDO	Enterprise development, Seed dressing drums & marketing campaigns	yes	Procurement tender 3 market campaigns in Nanenane Farmer Field Day exhibitions
Consultants	Farming as a business (FAAB Coaches) Aggregation, record keeping, financial literacy, bean quality, group management	Yes	Consultancy tender constant Field based training in wards with structured production
TCCIA	Lobbying private sector interest	yes	MoU
Local government	Agricultural extension Cooperative officers Trade officer	yes	Agricultural extension, capacity building groups, registration AMCOS

Strengthening local business development services - FAAB ward coaches

To enhance the availability of value chain business support services, the project selected and trained 9 business development service providers who are assigned to wards that have structured production and marketing arrangements. The deployment of FAAB coaches aimed at improving the provision of marketing extension services, financial literacy and bean quality to producer groups participating in structured marketing. The main mandate of FAAB coaches is to guide and supervise farmers to meet quality and aggregation requirements in structured marketing arrangements. Next to the producer groups, 13 ward agricultural extension officers were twined with these FAAB service providers so that they can receive on the job training on agribusiness and marketing extension

Local government extension services

The main service provider is the local government extension service as improved production remains the critical bottleneck to the improvement of smallholders' income. Based on the results of the random call-back survey, the strong SAKIRP investment in the LG extension system has paid off. Smallholder beneficiaries reporting to have received useful extension services increased significantly from the baseline value of 50 to 85% in December 2019. Moreover, also the range of services received per year increased significantly from 2.2 to 5.6.



Source: HH survey and beneficiary tracking

There was a slightly better appreciation by beneficiary farmers involved in structured marketing. The non-beneficiary group reported a lower satisfaction rate of 74%. The improvement is even larger for benefitting female farmers: from the baseline value of 40% to 85% in 2018 and this is linked to the selection of VICOBA as benefiting groups.

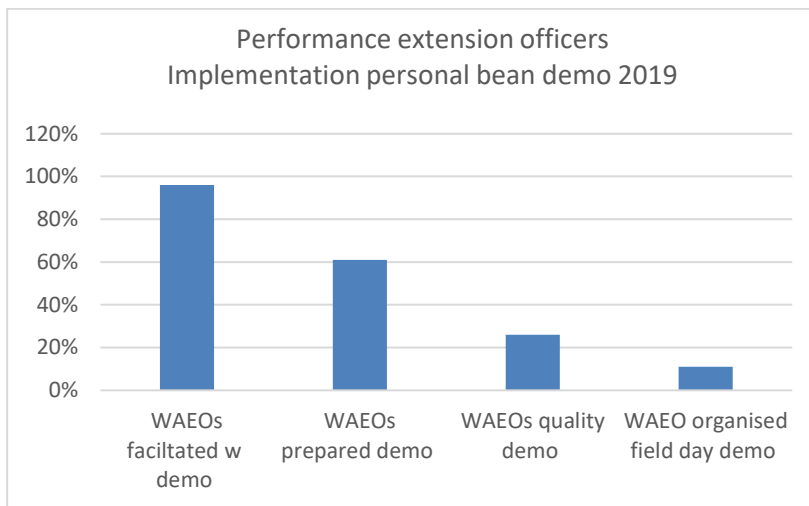
SAKIRP support to local government extension	
Item	Units
Tools - equipment	<ul style="list-style-type: none"> Total number 62 motorcycles are currently in use where by SAKIRP provides 70% of the functional motorcycles for agricultural extension in the intervention zone) Smart phones for mobile monitoring & data collection (total number 62 – SAKIRP provides 100% of the available smart phones for extension workers) Extension gear (coats, boots, weighing scales, extension materials, ...) Personal demo so that WAEOs internalise hands-on expertise and challenges Demo equipment: seed dressing drums 6, moisture meter 6, mechanised bean cleaning equipment
Trainings	<ul style="list-style-type: none"> Good agricultural practices 62 extension officers trained Kobo toolbox for data collection extension officers trained 62 extension officers trained Post-harvest management - 62 extension officers trained Gender mainstreaming – 62 extension officers trained Quality declared seed production by TOSCI – 6 extension officers trained Kobo Toolbox data quality management trained Soil and Yield Assessments - 62 new extension officers trained. Disease scouting & integrated pest management field training – 62 extension officers trained
Facilitation	<ul style="list-style-type: none"> Fuel motorcycle, airtime and top up allowance district monitoring of SAKRP activities
Output	<ul style="list-style-type: none"> 546 lead farmers coached & 14.017 farmers supported 321 on-farm demos and 367 multiplication plots planted Better grassroot data collection of agricultural data Annual Household Survey 2019 3 successful agricultural shows for the annual nanenane event

In 2019, the total SAKIRP coverage remained 56 wards which is about 54% of the rural wards in Kigoma region. The MTR recommended that the geographical area should not be expanded but that the project should look for quality and result consolidation. Expanding to more wards has equally other challenges: overlap with other projects (AGRA and UN one) and in many remaining wards there is often no extension worker that can meaningfully absorb the assistance provide by a development project.

SAKIRP Intervention Wards in Kigoma Region			
	Total	SAKIRP	SAKIRP coverage
Buhigwe	20	10	50%
Kakonko	13	10	77%
Kasulu	21	10	48%
Kibondo	19	9	47%
Kigoma	14	9	64%
Uvinza	16	8	50%
Regional	103	56	54%

District	# WAEOs	# groups	Group Members	average farmers/WAEO
Buhigwe	10	93	2298	230
Kasulu	10	103	2638	264
Kakonko	10	111	2390	239
Kibondo	9	87	2533	281
Kigoma	9	72	1707	190
Uvinza	8	69	1724	216
Total	56	535	13290	237

WAEO own personal demo

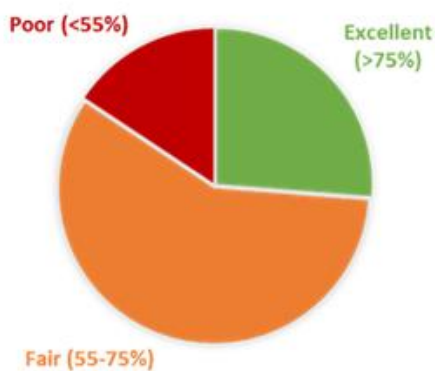


Source: SAKIRP M&E 2019

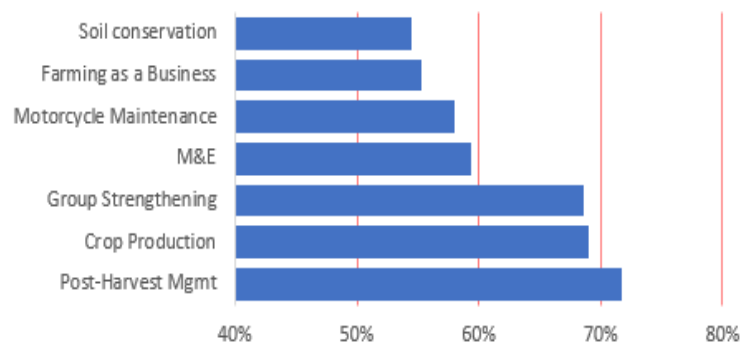
The quality of the personal demonstration plots was a challenge for a number of extension workers. While all extension workers were facilitated, only 26% implemented a demo that could be used as an example to promote the technology. Only 11% were able to organise a farmers' field day based on their demo.

Knowledge retention by extension workers

KNOWLEDGE RETENTION ABILITY AMONG WARD AGRICULTURAL EXTENSION OFFICERS



Knowledge retention ability and understanding per training subject



Overall extension performance

The extension workers' performance was systematically evaluated on a monthly basis and reported to the DAICO. Performance scoring is based upon: (i) timely completion of project activities and quality of performed tasks as reported through mobile data collection, and (ii) qualitative scoring by their supervisors on main competences and tasks. This performance has been fluctuating considerably which can mainly be contributed to both workload variability according to the agricultural seasons and changes in monitoring and coordination intensity by respective supervisors.

Factors contributing to the success of local government 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 - effectively demanding quality extension services
6. Profitable agricultural value chains that generate household income
7. Facilitation of extension officers with transport and communication.

On average an extension worker is coaching 10 farmers groups and 237 farmers. There are 6 female WAEOs (11%).

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.
- Local service providers' inexperience with the implementation of a value chain approach
- Limited 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.
- 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. It is difficult to delegate the entire service provision.

3.6 Performance output 4: smallholder farmers & production strengthened.

3.6.1 Progress of indicators

Result 4: Stronger position of smallholder's farmers in VC is enhanced through improved productivity, economic integration & empowerment								
INDICATORS	Project Baseline		Overall Target	2018		2019		2020
	Date	Value		Actual	Target	Actual	Target	Target
I4.1a - Smallholder gross margin per hectare of cassava – <i>growing season >18month</i>	2017	657.007	1.300.000	106.386	400.000	267.000	800.000	1.300.000
I4.1b - Smallholder gross margin per hectare of beans <i>growing season 4 months</i>	2017	-146.830	950.000	19.857	400.000	191.000	700.000	950.000
I4.2a - Value of incremental sales of cassava by smallholder beneficiaries (TZS)	2017-2018	667,641	1.500.000	631,429	600.000	526,402	900.000	1.500.000
MALE		694,606		753,624		618,068		
FEMALE		640,675		509,233		439,294		
I4.2b - Value of incremental sales of beans by smallholder beneficiaries (TZS)	2017-2018	324,013	1.800.000	370,613	900.000	411,935	1.300.000	1.800.000
MALE		344,136		381,128		501,419		
FEMALE		303,889		360,098		325,577		
I4.3a - % adoption of cassava improved technologies and GAP by smallholder beneficiaries	2017-2018	10%	60%	13%	20%	20%	40%	60%
MALE		-		15%		21%		
FEMALE		-		11%		18%		
I4.3b - % adoption of beans improved technologies and GAP by smallholder beneficiaries	2017-2018	18%	60%	29%	20%	35%	40%	60%
MALE		-		33%				
FEMALE		-		21%				
I4.4a - Yield of cassava [MT/Ha]	2017-2018	2,9	6	3,1	3,5	3,4	4,5	6
MALE		3,1		4,0		3,7		
FEMALE		2,7		3,4		3,4		
I4.4b - Yield of beans [Kg/ha]	2017-2018	440	1.200	570	600	542	850	1.200
MALE		411		568		573		
FEMALE		469		588		511		
I4.5a - % of beneficiaries engaging in collective cassava marketing	2017-2018	6%	25%	10%	10%	5%	15%	25%

Source: SAKIRP household survey 2018, 2019 & quarterly beneficiary monitoring

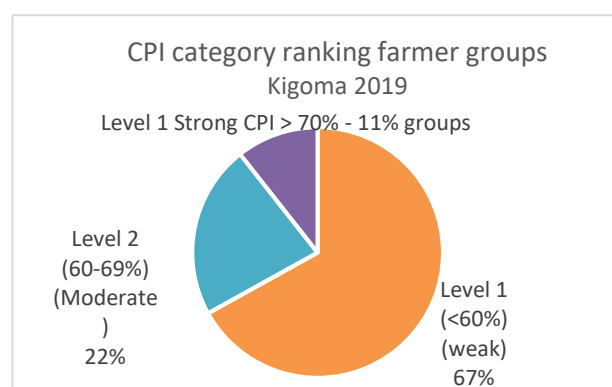
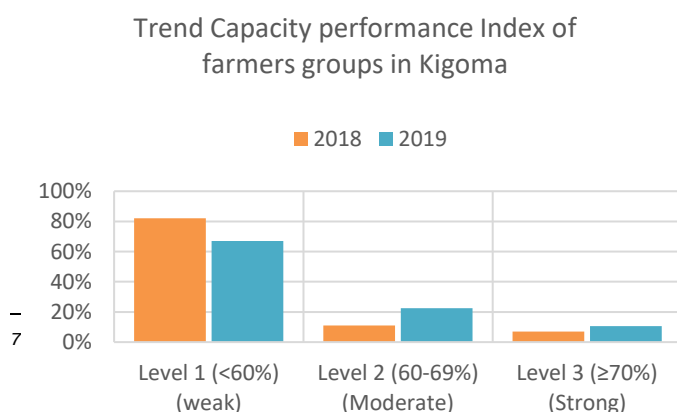
3.6.2 Progress of main activities

Progress of <u>main</u> activities ⁷	Progress:			
	A	B	C	D
1. Empowering farmers through farmer business schools		X		
Capacity assessment of farmers' organisations CPI tool			X	
Train farmer groups on farming as a business		X		
Train farmer groups on contract farming, crop insurance and collective marketing		X		
2. Supporting farmers' organisations for improved integration and empowerment in the value chain		X		
Coach and guide farmer groups on group marketing and sustainable trade relationship		X		
Organize market linkage meeting between group leaders and traders/aggregators to establish aggregation volume and plan for collective supply		X		
Lead farmers: capacity building/ motivation and outreach		X		
Facilitate adoption Savings & Credits schemes non VICOBA groups			X	
3. Improved cassava & bean productivity and production to improve smallholder income		X		
Train and coach farmers on improved agronomic practices		X		
Conduct quick scan of cassava diseases and pests in Kigoma region		X		
Facilitate participatory screening of improved cassava varieties		X		
Support community multiplication plots and cutting supply system of disease resistant cassava varieties		X		
Post-harvest management practices cassava: on farm testing & farmer training		X		
Facilitate participatory & market driven screening of new bean varieties		X		
Soil analysis		X		
Post-harvest conservation beans: test & demonstrate technology options		X		
On farm demos: good agronomic practices & integrated pest/ disease management		X		
Organize field-days & facilitate exchange visits		X		

3.6.3 Analysis of progress made

Capacity strengthening of producer groups

Capacity performance assessment was done of 546 farmer groups to evaluate their potential for developing into a professional organisation. The CPI (Capacity Performance Indicator) tool was adapted from AGRA. The following criteria were considered: accountability, professional capacity, income diversity, strategic potential, production management, marketing, participation, advocacy. The (CPI) tool is used to have a baseline and measuring tool for group capacity building. There are about 52 groups in the highest level (up from 39 in 2018) and that have moved beyond the stage of being merely an association expecting government and donor subsidies.



reactive measures are required.

In 2019, the cluster approach at ward level was developed to facilitate strengthening and coaching of producer groups. A total of 149 clusters (an average of 25 clusters/ district) covering about 550 groups was established. At cluster level, group leaders meet regularly with the WAEOs and the project advisors for assessment of progress, planning and the experience sharing. The intention is that the cluster approach enhances collective action: produce marketing, aggregation, acquiring bulk agricultural inputs, trade and service provision. The ultimate aim is to scale up the cluster of groups as agricultural marketing cooperative society (AMCOS), to professionalise the groups and reach economies of scale that are required for more effective value chains. The initiative resulted into formation of an AMCOS at Nyakitonto ward in Kasulu district, with a total of 11 groups and 249 members. It is anticipated that as an advance level organisation, the Nyakitonto AMCOS will serve as an example for the other normal groups.

In 2019, SAKIRP supported 546 groups against the original total target of 600 farmer groups. The mid-term review recommended strongly to focus the best groups and consolidate results; rather than aiming at a maximum number of farmers and continue with passive groups. MTR recommended as well to scale up the principle of local contribution for increased motivation and ownership. Working with the groups of level 2&3 of the CPI index (13% of the groups) will provide the best pre conditions for in depth capacity building and the graduating of the groups into more advanced associations.

The following support was proposed (MTR 2019):

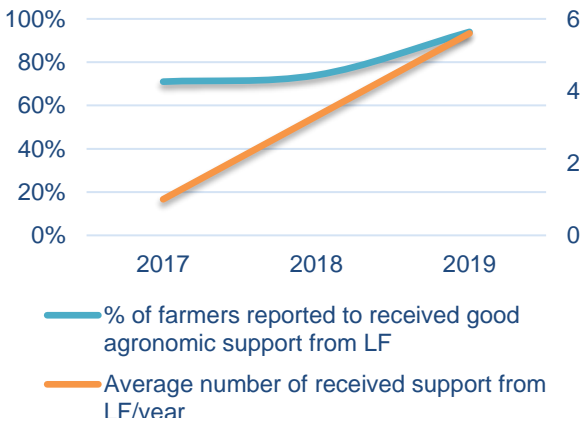
- Financial linkages with banks and micro finance institutes
- The implementation of in-kind loan or revolving fund schemes;
- To build the capacity to manage equipment and infrastructure;
- To accompany developing VC related projects and business plans

For reasons of marketing and input supply for food crops, the GoTz promotes the creation of AMCOS for mixed crops. Many cooperative unions and primary societies of cash crops remain with debts and a hangover of poor management. The formulation of clear strategies and guidelines will help move to overcome the problems of the past so as to ensure functionality of the organisations regarding the marketing, the farmers membership and collateral to facilitate financing of the 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. 546 LFs are working with their groups; 41 % are female. Lead farmers are monitored by the groups and WAEOs. A performance assessment was in 2019. 20% of best performing lead farmers were awarded an input package for bean production. 10% of the lead farmers were replaced and the new ones trained.

The appreciation of the beneficiaries of the services of the lead farmers has improved from 74% in 2017 to 94% in 2019 but varies between the districts. The average support increased from 1 in 2017 to 9.5 in 2019.



Source: SAKIRP household survey 2018, 2019 & quarterly beneficiary monitoring

Currently here is the status of the lead farmers enrolled.

Strength	Weakness
<ul style="list-style-type: none"> ➤ Elected by producer groups based on set of criteria – strong internal dynamics ➤ 92% of LFs has basic reading and writing skills ➤ Voluntarily offer the service with minimum remuneration as working gears. Strong element for sustainability. ➤ Equipped basic skills on good agronomic practices ➤ Cohesion, LFs, WAEO relationship 	<ul style="list-style-type: none"> ➤ Confusion from different actors in the ground on working modality and incentives. ➤ Selection criterion are sometimes not respected impacting on performance lead farmer

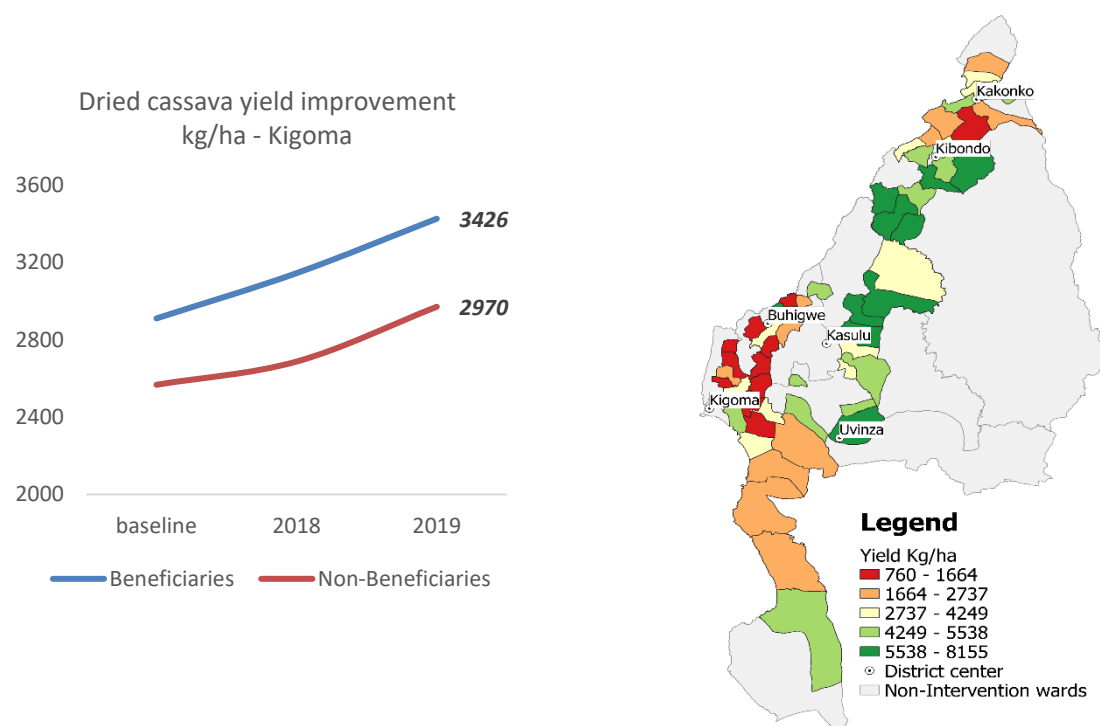
Cassava production and income

Cassava production

As compared to the 2017 baseline, the share of beneficiary smallholders involved in cassava production is decreasing from 82% at baseline level to 70% anno 2019. Out of the 70% of beneficiaries reporting to have harvested cassava in 2019, 70% are reporting their cassava production to increase (45%) or remain stagnant, against 30% reporting a decrease.

Cassava yields

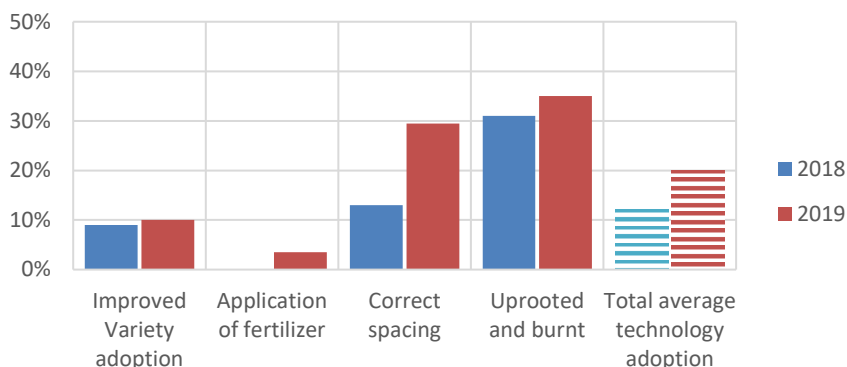
Cassava yield increased by 516 kg/ha, from 2910 kg/ha in 2017 to 3426 kg/ha today. Cassava yields vary a lot by district, with Kasulu and Kibondo District achieving the highest yields by far.



Improved technology adoption.

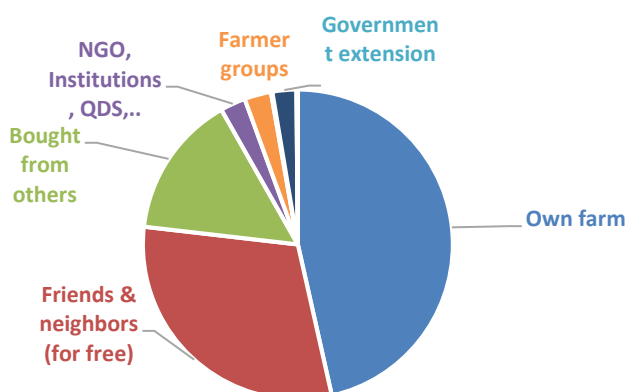
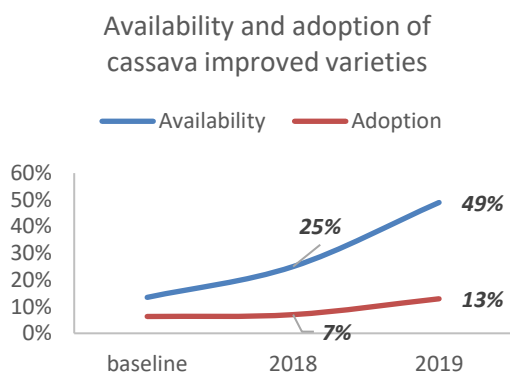
Farmers' GAP and technology adoption has increased from 13% in 2018 to 20% in 2019. Most farmers are adopting the right planting space and uprooting/burning of infected plants. The female farmers' overall technology adoption rate is slightly lower than males: 18% versus 21%. These still modest rates of technology adoption are explained by the cassava price slump and lack of credit facilities.

Cassava technology adoption year comparison
Kigoma 2019



Availability and adoption of cassava improved varieties

Currently 49% of benefiting farmers are reporting to have access to improved varieties, this is two times more than last year. There is a notable improvement in adaptation of improved varieties from 7% in 2018 to 13% 2019. However, in view of the threat of virus diseases, the availability of double tolerant varieties especially Tz130 is a major bottleneck.



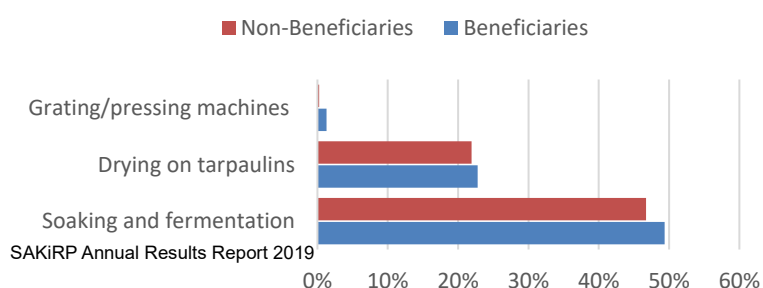
Origin of cassava cuttings

Supply for cassava cuttings is still a challenge for smallholder farmers. 4% of farmers are reporting to obtaining cuttings from Institutions (unlike 1% reported in 2018), and 52% (dropped from 68% in 2017) getting from neighbours for free.

Post-harvest technology adoption

48% of farmers prefer method of soaking and fermentation of cassava before processing into flour, other 22% use tarpaulins for drying and then process cassava flour and remaining 1% adopt the use of grating machine for cassava processing. After 2 decades of support to cassava processing by various development projects, there is not a single unit operating. There is no market for improved cassava flour as the few local consumers prefer the fermented taste. In the intake area of Kasulu town, fermentation and milling has been adopted as a mitigation strategy for the low cassava prices in Burundi.

Post-harvest cassava technology adoption Kigoma



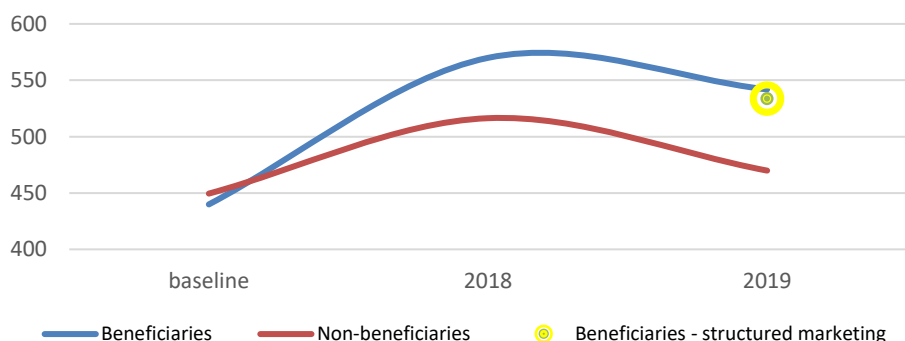
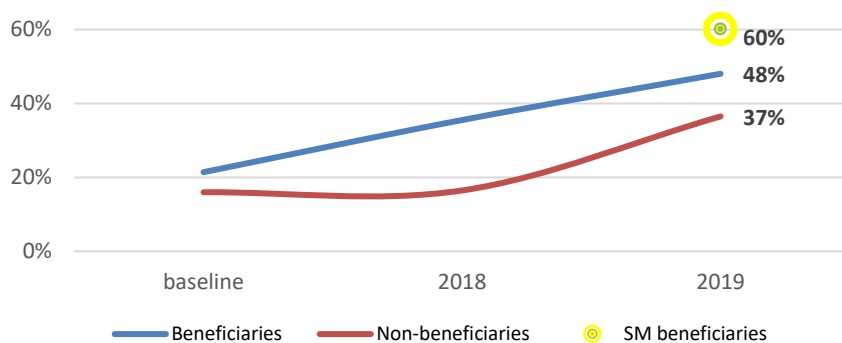
Cassava trading and markets

Since 2018, the cassava market in Kigoma Region experienced a steep decrease in demand, causing excess supply and the price to fall. As a result, a significant increase of beneficiaries selling their cassava to local collectors was noticed, from 38% in 2018 to 46% in 2019, whereas sales to traders experienced a slight decline. Despite local collectors clearly gaining power as the main direct buyers of cassava - produce, beneficiary smallholder increasingly experiences difficulties in finding buyers, from 26% in 2017 to 37% in 2019.

Bean production and income

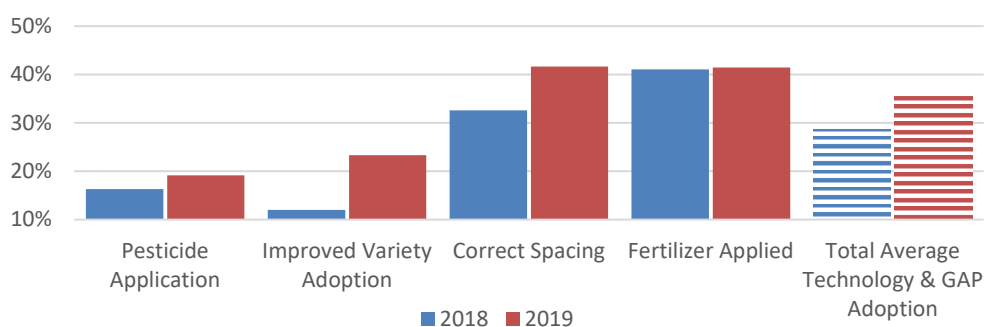
Over the past 2 years, bean production in Kigoma Region increased significantly, as reported by 48% of beneficiary smallholder farmers. Only a 26% minority of respondents reporting a decrease in production, 73% respondents saw their bean production increase or remain the same (1% stopped cultivation). Average yields have improved from 440 kg/ha (2017) to 542 kg/ha (2019). The yield increase is attributed both to the increased adoption of improved bean varieties and good agricultural practices. Over the past 2 years the overall improved technology & GAP adoption increased from 18% to 35%. The last year's increase is mainly to be attributed to an increase in improved variety adoption and adoption of planting in rows, adhering to correct spacing recommendations, instead of broadcasting. Pesticide application experienced only a slight increase. No significant changes were observed for fertilizer. An important constraint to technology adoption remains the lack of credit. The availability of improved bean varieties has increased from not-available-at-all in some areas of the region in 2017, to an average availability of 42% today, among smallholder farmers. Similarly, adoption levels increased from 0% to 23% by today's beneficiary farmers.

Bean farmers increasing their production



Bean yield (kg/ha)

Improved technology & GAP adoption beans



Source: SAKIRP household survey 2018, 2019 & quarterly beneficiary monitoring

On farm demonstration plots are a tangible activity for agricultural technology assessment and dissemination, observations are used to assess the new varieties of cassava & beans and good agronomic practices. 56 WAEOs were facilitated to establish own demo plots for beans to internalise the full concepts. Nevertheless, most groups are no longer interested with the demo plots rather in production and subsidized inputs which is also an indicator for the coherence and quality of the producer group.

Good agricultural practices tested on farm versus local practice	
Beans	<ul style="list-style-type: none"> Varieties (Lyamungo 90, Montcalm, Red hawk and Selian 13) Modest fertilizer rate & foliar spray
Cassava	<ul style="list-style-type: none"> Disease resistant varieties CMD – CBSV (Kipusa, Chereko, Mkumba, & T130) Spacing

Bean and Cassava Demonstration and Multiplication Plots in Kigoma Region				
Year	Demonstration plots		Multiplication plots	
	Beans	Cassava	Beans	Cassava
2017	96	93	24	24
2018	208	113	164	203
2019	160	18	475	228

Seed system

- Only 5.3% of the seed used in Tanzania is certified which is exceedingly inadequate to meet the needs of farmers. 95% of the seed planted by farmers is from the informal seed systems.
- Positive changes are observed in the trend of bean seed sources. Today fewer beneficiary farmers get their seed for free from friends & neighbours (16% against 40% in 2017), local shops (4% against 12% in 2017) or from weekly markets (43% against 64% in 2017). More and more beneficiary farmers tend to get their seeds from NGOs, research institutes or projects (8% against 0% in 2017) and farmer groups (12% against 0% in 2017). However, additional efforts are key in order to cross the chasm to reach adoption of improved bean seed purchase by the majority.
- need of rapid and cost-effective multiplication at ward level in order to serve many farmers.
- Community multiplication plots offer a good entry-point for new varieties from the formal system. They are complementary to the certified seed supply.
- Seed business in remote villages is not profitable for agro-dealers. The fragmented demand and high transport cost do not make business sense. With this reason there is a need to pilot at least 3 – 6 groups (1- 2 centre or groups) per district which have to be acquainted with the quality declared seeds (QDS) production through Community Production System with both aspects rainfed and irrigation production systems for seeds availability and sustainability. The major qualification to consider for the group will be its strength and willingness to commit their efforts in the system. This will be followed by unique role in promoting and advocating Community Seed Production (CSP) for smallholder farmers.

The 164 community bean multiplication plots produced 116.000 kg of bean seeds in 2019.

The 228 community cassava multiplication plots are expected to yield 10 million cuttings for the 2020-Q4 season.

SAKiRP is conscious about the need for clean planting materials and strict disease monitoring. The seeds and planting materials for demos and multiplication plots were acquired from TARI Maruku and TOSCI registered commercial seed farmers (CSE) in order to ascertain the quality. However, experience has demonstrated that even cuttings originating from research institutions and certified commercial seed producer can be infected with CBSV.

-Estimated available planting material produced in Kigoma Region (at group level)		
	Bean seed (kg)	Cassava cuttings
<i>2017</i>	-	-
<i>2018</i>	50.000	1.000.000
<i>2019</i>	30.000 + structured market seed	1.000.000
<i>Projected 2020</i>	60.000 + structured market seed	10.000.000
<i>Projected 2021</i>	100.000 + structured market seed	100.000.000

3.7 Performance output 5: marketing & trade.

The focus of result 5 is to implement strategies and initiatives that increase farmers and other value chain actors' access to markets whilst promoting sustainable trade. Over the reporting period, the project initiated structured marketing arrangements for beans by linking smallholder farmers to formal buyers. The section below provides a brief overview of the main activities performed together with the realised results.

3.7.1 Progress of indicators

Result 5: Improved market access and sustainable trade								
INDICATORS	Project Baseline		Overall Target	2018		2019		2020
	Date	Value		Actual	Target	Actual	Target	Target
15.1a - % of smallholder producer groups participating in structured cassava market relationships	2017	5%	50%	1%	10%	3%	25%	50%
15.1b - % of smallholder producer groups participating in structured bean market relationships	2017	4%	50%	1%	10%	3%	25%	50%
15.2a - Value of cassava sold through collectively smallholder producer groups (Million TZS)	2017	28	8.000	4	600	185 ⁸	3.800	8.000
15.2b - Value of beans sold through structured marketing by smallholder producer groups (Million TZS)	2017	21	4.000	112	400	71 ⁹	1.900	4.000
15.3a - % increase in sales by local cassava traders	2017	0%	50%	-5%	50%	30%	50%	50%
15.3b - % increase in sales by local bean traders	2017	0%	50%	53%	10%	32%	25%	50%
	<i>MALE</i>	0%	n/a	53%		5%	n/a	n/a
	<i>FEMALE</i>	0%	n/a	n/a	n/a	n/a ¹⁰	n/a	n/a
15.4a - % of farmers accessing objective sources of cassava market information	2017-2018	41%	75%	33%	50%	25%	65%	75%
	<i>MALE</i>	44%		35%		27%	n/a	n/a
	<i>FEMALE</i>	39%		32%		23%	n/a	n/a
15.4b - % of farmers accessing objective sources of bean market information	2017-2018	29%	75%	32%	50%	23%	65%	75%
	<i>MALE</i>	28%		35%		26%	n/a	n/a
	<i>FEMALE</i>	31%		28%		19%	n/a	n/a

⁸ This figure is based on the annual follow-up survey

⁹ This is the value of beans sold through structured market linkages

¹⁰ The project does not have female traders on its BDS intervention

Explanation of indicator progress

Indicator	Comments
15.1a - % of smallholder producer groups participating in structured cassava market relationships	Farmers have continued to sell cassava individually due to the absence of formal large-scale buyers. Cassava trade remains dominated by informal traders
15.1b - % of smallholder producer groups participating in structured bean market relationships	3% (21) of 600 farmer groups have been linked to structured market relations. Over the period, the buyers included Casibeans.
15.2a - Value of cassava sold collectively by smallholder producer groups (Million TZS)	This figure refers to sales collectively made by farmers without formal marketing arrangements. The figure is based on responses from the annual follow-up survey.
15.2b - Value of beans sold through structured marketing by smallholder producer groups (Million TZS)	Beans sold through the marketing arrangement with Third Man and Casibeans reached 71 million shillings.
15.3a - % increase in sales by local cassava traders	The volume of cassava sold by local traders increased by 30% owing to a generally stable though low price
15.3b - % increase in sales by local bean traders	The volume of beans aggregated and sold by local crop traders increased by 32%. This can be attributed to an increase in the demand for beans nationally and regional.
15 - % of farmers accessing objective sources of cassava and bean market information	This indicator dropped to 25% and 23% for cassava and beans respectively. This is most likely because no farming as a business training were conducted over the past year; FAAB sessions keep farmers informed about market conditions and the fact that structured marketing arrangements were limited to few high potential areas means that the other areas were left unserved.

1.1.1 Progress of main activities

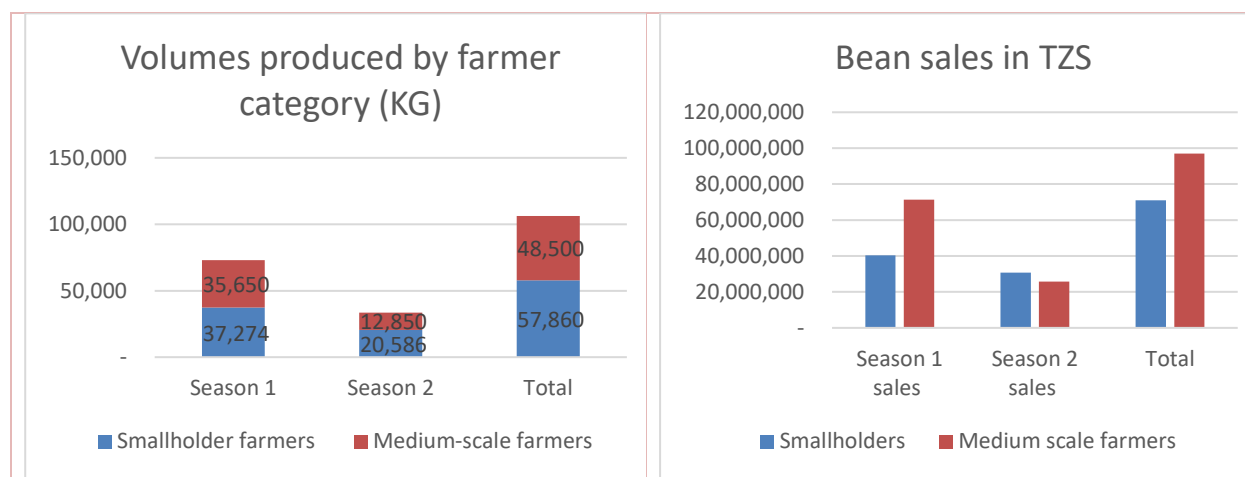
The progress of the project's indicators for increased market access is lagging. Only 3% of the project's beneficiary population has access to structured markets. This lag reflects the lack of access to value chain financing services to include more farmers in structured production and marketing arrangements. While more farmers have access to markets than the reported figures, these markets remain informal. Progress has been made under all the five major activity groups for this result area.

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	

3.7.2 Analysis of progress made

Structured market linkage for Lyamungo and red kidney beans

The 2018/2019 season saw the project partner with Casibeans, a Belgian bean trading firm, to produce and market red bean varieties from Kigoma. This step was a logical progression from the varietal trials that the project had contact during previous seasons. A total of 344 smallholder farmers were linked to the company and supported with inputs under the in-kind loan scheme describe under result two. This market linkage saw farmers produce and sell beans with a total market value of 168 million shillings (€ 67.000). 32% of the total sales (€21.300) were made to Casibeans via a local aggregating firm, Thirdman Ltd, while the balance was bought by the project for reuse as in-kind seed credit for the subsequent season. The sales of beans were split between smallholder farmers and medium-scale farmers. The monetary value of the bean sales is illustrated in the graph below.



As indicated in the graph above, medium-scale farmers exceedingly outperform smallholder farmers in terms of their sales volumes. This is mostly because smallholder farmers have yields which results in low marketed volumes. Smallholder farmers recorded average bean sales of 342.000 shillings per season per farmer whilst medium-scale farmer sales averaged 35 million shillings per season per farmer.

Category of farmers	Season 1 Sales average sales in TZS	Season 2 sales average in TZS
Smallholder farmers	341,707	165,097
Medium-scale farmers	35,650,000	25,700,000

Challenges encountered

- Farmer groups were generally not ready to assume the responsibility of aggregating beans and selling directly to the end buyer, Casibeans. This necessitated the introduction of an intermediary firm to play that role
- Lack pre-financing capacity to bridge the gap between aggregation and payment by the end-buyer disrupted smooth operation of the collective selling process.
- The intermediary firm did not have prior experience in bean aggregation and export. This led to bean quality management challenges in the course of exporting
- The exporting process took long to complete due to many official requirements imposed by the regulatory authorities
- Despite that the project was promoting new varieties, there was a challenge of side-selling motivated the urge to get cash quickly.

Lessons emerging from structured marketing arrangements

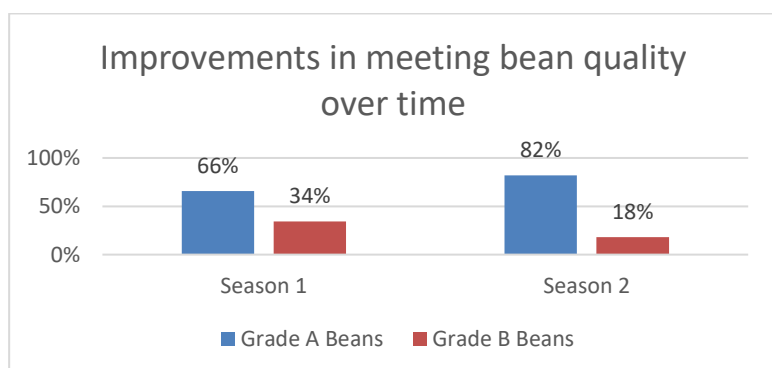
- The success of structured marketing arrangements depends on farmers' ability to produce enough to meet buyers' quantity requirements
- Farmers are generally able to meet the stringent crop quality requirements if coaching and facilities are provided. Producers appreciate the value addition at farm level.
- Export value chains are too complicated for smallholder farmers. A stepwise approach which prioritises national markets is more practical and less risky. While export markets appear to be lucrative, it is advisable to use national markets to build smallholder capacity and target export markets in a latter phase. If export markets are targeted from the onset, it is important to enlist the services of experienced intermediary firms.
- Arrangements for aggregation must be elaborated from the initial planning stages of structured marketing arrangements to reduce the risk of side-selling and increase the attractiveness of collective marketing to farmers
- Appropriate and flexible value chain financing services are indispensable to the success of efforts to integrate farmers in value chain
- Moreover, in a smallholder setting, the participation of medium scale farmers is important to manage the production volume risk and obtain economies of scale. Medium-scale farmers have the capacity to mobilise their own production resources, deliver significant volumes and honour contracts with firms.
- In areas where there are weak apex farmer organisations, intermediary firms with capacity to aggregate and pre-finance commodity trading are indispensable and constitute a critical success factor.

Support to aggregation and post-harvest management

In 2019, the project supported 7 bean aggregation centres which serviced farmers participating in structured production and marketing relationships. The support provided was both material and technical. Each aggregation centre was supplied with quality management equipment such as bean sorting tables, tarpaulins and pallets for the warehouses. Moisture meters and weighing scales were made available during the aggregation period.

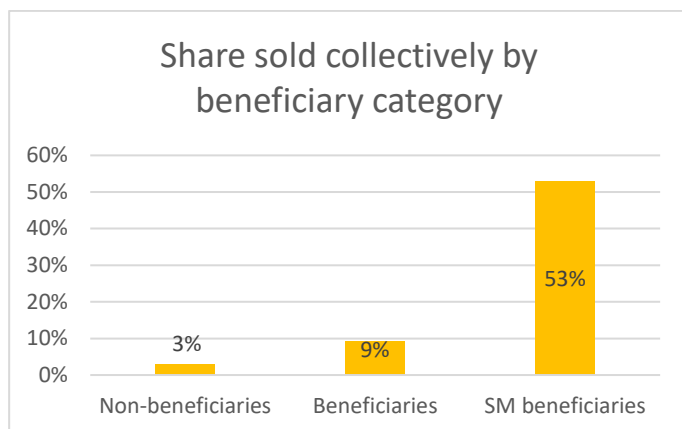
Technically, short-term experienced staff were engaged to coach farmers on post-harvest management and to guide the bean aggregation process. The outcome of these efforts was that smallholder farmers managed to supply high-grade beans which could be directly exported without additional cleaning or sorting. Simple technologies (tarpaulin drying, moisture meters, sieving tables) are adequate. Mechanised threshing and grading did not add value as available technologies were not well-suited local farmer conditions.

Figure 2: Progression of farmers in ability to meet end market bean standards between 1st and 2nd season



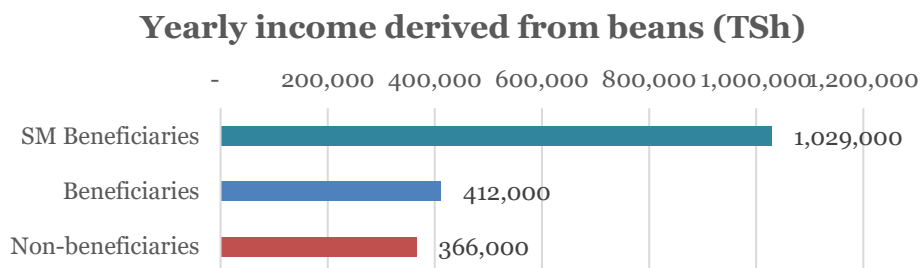
Emerging impact of structured marketing linkages

Results of the baseline follow-up survey show that, despite its technical challenges, structured marketing is an effective strategy for transforming value chains and providing benefits to smallholder farmers. Firstly, the survey shows that structured marketing arrangements increase the number of farmers participating in collective marketing action. As shown in the graph below, 53% of structured marketing beneficiaries participated in collective marketing compared to 9% recorded for beneficiaries that were not included in structured marketing arrangements. Collective marketing is a critical avenue for strengthening the position of smallholders in value chains.



Apart from increasing collective marketing action, structured marketing is associated with increased income at household level. The table below shows that the annual income of households that participated in structured marketing arrangements was more than double the income of households that did not have such arrangements in place. The increased household income can be attributed to better prices, increased acreage and improved productivity.

Figure 3: Increase in smallholder farmer household income



Future directions on structured production and marketing

Following the two pilot phases that were conducted in the first half of 2019, the project has scaled up structured marketing arrangements through a collaboration with WFP. Through this collaboration, WFP will buy 500 metric tons of red beans from SAKIRP-supported smallholder farmers. This linkage arrangement covers 980 farmers spread across four (4) districts. The structured marketing arrangement is planned to expand to include yellow beans and maize in the near term.

Mobilising the local private sector to address trading challenges

The project continued to engage the local business membership organisation consisting of crop traders and processors to build their capacity to coordinate their business activities. During the reporting period, a consultative meeting between members of the business membership organisation and government officials was conducted to find solutions to the worsening cassava business

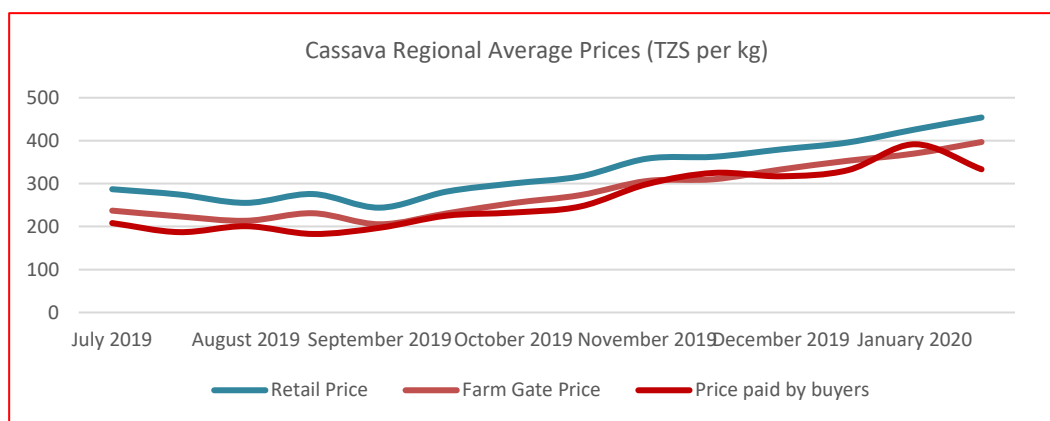
Leveraging digital applications to expand market information sharing

The project leveraged the availability of smart phones amongst government extension workers to utilise WhatsApp as a platform for disseminating market information to smallholder farmers. SME agribusiness are connected through WhatsApp groups which they use to share trading information and knowledge.

Cassava market evolution

Cassava prices remained depressed over the course of 2019. Demand from the traditional export markets in Burundi and Uganda remain weak as production in those end market countries continues to weaken. Opportunities for processing remain limited as demand for processed cassava flour is too low. This is because the current buyers from Burundi and Uganda are highly invested in processing facilities on the demand end. Moreover, the exportation of processed cassava process is a lengthy process which requires certification by the local bureau of standards and significant investment in processing facilities. Without access to finance, local processors are not able to meet these requirements.

The project has continuously tracked developments in the Chinese market for improved cassava chips and some elementary assessments were conducted with two companies with links to that market. The costing and pricing analysis conducted by the project team showed that the Chinese market offers a stable but low price for cassava chips. The viability of exporting chips to China-bound exporters is undermined by high transport costs of shipping the chips from Kigoma to the port of Dar es Salaam. The preparation of chips for sale to China requires the use of diesel or petrol-operated chipping machines which add to the cost of preparing the chips. This considered, the Chinese market remains big but unattractive to Kigoma smallholders unless there is a local processor who is based in Kigoma to buy and process the cassava into chips on its own. In sum, the market for cassava has remained largely depressed with occasional seasonal upswings which are driven by shortages that occur in the high consumption markets of Burundi, Uganda and Rwanda.



General challenges constraining access to markets

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

- **Low productivity (smallholder farm management) and widespread crop failure (climate change):** these problems compromised the success of the structured marketing pilot as quantities produced were far below market expectations. This resulted in the withdrawal of private sector partners.
- **Lack of appropriate private sector companies:** In Kigoma there are no experienced intermediary firms that can take charge of crop aggregation, pre-financing and marketing to end buyers. Smallholder farmer organisations in food crops hardly exist and are too small to undertake necessary aggregation roles. The Tanzanian government is on a drive to revive agricultural marketing cooperatives (AMCOS) but the success of these farmer-based organisations is uncertain. In the past AMCOS have been riddled with problems of mismanagement, fraud and generally inefficiency.
- **Informality of value chains and side-selling:** A flourishing informal crop trading sector in Kigoma is a huge threat to structured market linkage arrangements. The side-selling problem scares away formal buyers and discourages private investment in credit and technical support of crop production.
- **Underdeveloped bean seed marketing system:** The lack of a functional bean seed supply system makes it difficult to scale-up production without directly involving the project in input sourcing and credit arrangements. The price of bean seed is still considered too high by farmers in Kigoma.

4 Budget monitoring

By 31st December 2019, the overall SAKIRP budget turnover is 40% for 70 % of the project time. 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.

Euros	Total Budget	TOT previous Years		TOT	TOTAL EXEPENDITURES	Balance	Disbursement Rate end 2019
		2017	2018	2019			
Total général	8 000 000,00	1 293 890,74	889 272,11	986 544,14	3 169 706,99	4 830 293,01	40%
A - Activities	4 260 000,00	346 980,32	367 794,40	435 295,42	1 150 070,14	3 109 929,86	27%
TAN1403111_A01	312 000,00	113 705,34	15 866,95	13 625,17	143 197,46	168 802,54	46%
TAN1403111_A02	2 030 000,00	26 850,34	26 538,06	178 853,54	232 241,94	1 797 758,06	11%
TAN1403111_A03	585 000,00	86 329,56	147 969,12	68 721,55	303 020,23	281 979,77	52%
TAN1403111_A04	852 000,00	41 380,52	162 540,62	153 790,60	357 711,74	494 288,26	42%
TAN1403111_A05	481 000,00	78 714,56	14 879,65	20 304,56	113 898,77	367 101,23	24%
B - NTAs/ITAs	2 054 400,00	519 732,39	360 340,83	339 344,59	1 219 417,81	834 982,19	59%
X - Reserve	93 050,00	-	-	-	-	93 050,00	0%
Z - General Means	1 592 550,00	427 178,03	161 136,88	211 904,13	800 219,04	792 330,96	50%

In absolute and relative terms, expenditure shortfalls are focused on A02 financial services (micro finance fund and business innovation fund). The low budget turn-over can be explained by the following factors:

- Enabel disposes not yet of tools to support private sector. The anticipation was the business innovation fund (30% of the activity budget) would allow for investments in private firms and producer organisations. To overcome the problem, the fund was converted in a public infrastructure fund for access to markets.
- Micro finance grant was vetoed (17% activity budget). The in-kind input revolving grant that was developed as an alternative is inefficient, entails many risks with little scope for upscaling.
- The TFF anticipated a much higher absorption capacity of producer groups with strong business orientation and sufficient management skills. However, only 15% of the groups meet minimum criteria.
- The demand for processing equipment investments anticipated during the formulation did not materialise because of a structural slump of the cassava market, the consumer preferences for fermented cassava and weak producer groups.
- Quality implementation and value for money need time; as does the value chain development approach. Expenditures can be increased drastically; but they still need to make development sense.
- SAKIRP has developed a cost-efficient approach. An example is the construction of stone arch bridges that allow for 80% cost saving and rely on local contribution of the community. This approach does not spend a lot of money. But it provides excellent foundation for sustainability, local resource mobilisation and development relevance.
- Generally, project implementation is not linear but expenditures are expected to increase considerably in last years of project lifespan.

Mitigation efforts are:

- Speed up infrastructure construction
- HQ suggested extension of project with 1 year as suggested by MTR 2019 and approved by the SAKIRP steering committee.
- Support best groups with solid track record with revolving fund as suggested by MTR 2019

5 Risk management

Identification of risks			Risk analysis			Risk mitigation			Follow-up of risk	
Risk Description	Period of Identification	Risk Category	Likelihood	Potential Impact	Total	Action(s)	Resp.	Deadline	Progress	Status
Formal agribusiness enterprises are pulling out of Kigoma because of high risks & costs, fragmented supply and unfavourable government policies.	03/09/2018	DEV	High	High	Very High	Expand search for other agri-business firms with social objective	MUSIN AMWA NA Earnest	N/A	Casibbeans and Third Man engaged for bean market linkage pilot in 2019-Q1. Both companies pulled out of the bean value chain because of losses.	Completed
						Develop market linkage between farmers and World Food Programme which has shorter supply chains for refugee camps in Kigoma	MUSIN AMWA NA Earnest	30/06/2020	MoU established with WFP. WFP approved 500T beans smallholder supply in their procurement plan. Beans aggregated but no credit for farmer payments. Smallholder production might not meet 500T clean beans.	In Progress
Enabel has no modalities to support the private sector or engage in micro finance	01/07/2018	DEV	High	High	Very High	Look for alternative funding sources ie DGD/EAGC	Chetkovich Alex	28/02/2019	Expression of interest submitted for bean cleaning line and storage. Third Man pulled out of the partnership with Casibbeans because of anticipated losses. As a consequence the EAGC funding request was cancelled.	Cancelled
						In kind credit supply as revolving funds for the producer groups participating in structured marketing.	MUSIN AMWA NA Earnest	N/A	For 2018-19 season, 21 groups supported with in kind loans only 24% able to clear debt which was re-invested in group input revolving fund . 39 million Tsh - 48% is outstanding debt.	In Progress
						Grant agreement with PASS for a co-guarantee fund to increase willingness banks to loan in agriculture	HIEN Naloyare	15/03/2020	discussions grants desks HQ and PASS	In Progress
Trade in Kigoma is dominated by a fragmented informal sector with limited growth potential and interest to develop smallholder agriculture. Opportunities for	20/12/2016	DEV	High	High	Very High	Attract systematically private sector	MUSIN AMWA NA Earnest	N/A	after pilot private sector pulled out because high risk and high cost business with smallholder	Cancelled
						Few groups meet minimum requirements of social cohesion, business orientation and management. Creation of	MSAN GULA Henry	N/A	Only 2 potential case studies : Kiziguzugu and Nyakitonto. Early stage that require stronger commitment and leadership from producer groups.	In Progress

value chain development through lead firms are very limited.						umbrella AMCOS that can provide aggregation, quality control and logistical support to reach economies of scale				
With the movement of cuttings, the cassava brown streak virus disease is not contained and reduces cassava production considerably	20/12/2016	DEV	Medium	High	High	Informed TOSCI, Meda & ARI Maruku about problems quality cassava cuttings	HOLLE VOET Steven	N/A	Meda dispatched ARI Maruku staff but infected CSE cutting production field was not destroyed	Completed
						Destruction of cassava cuttings coming from infected CSE plots and replacement by clean planting material	MSAN GULA Henry	13/01/2019	Cuttings from infected CSE plots were all destroyed in Buhigwe.	Completed
						Phase out immediately Mkombozi and focus on Chereko and newly released Tz 130	MSAN GULA Henry	N/A	no Mkombozi support next season, start micro propagation of chereko & Tz 130 in 3 stations, collaboration prison and community multiplication plots	Late
Many more agricultural programmes that target the same local partners will create an absorption capacity problem of donor funding	20/12/2017	DEV	High	Medium	High	Advocate for district agricultural coordination meetings in line with ASDP II guidelines	District Agricultural Irrigation Cooperative Officer	N/A	in 2019 , each district organised district agricultural sector meeting with different actors	Late
Insufficient attention for the gender dimension in VC activities	20/12/2015	DEV	Medium	Medium	Medium	employment gender officer	HOLLE VOET Steven	01/01/2020	combination of NTA gender and credit	Completed
						prioritisation of gender strategic issues in bean aggregation and sunflower value chain	MLAKI Elias	N/A	good participation women (68%) but need for better prioritisation gender strategic issues	Late
Delays in contracting service providers due to bureaucratic procedures at region and district for procurement and tendering	20/12/2015	OPS	Medium	Medium	Medium	The specific agreements spells out that SAKIRP activities are done in own management	Gaudisart Patrick	N/A	Challenges from LG procedures have now shifted to constraints of Enabel modalities especially related to support private sector and micro finance	Completed
Resistance in LGA to contract nonstate service providers with the necessary know-how and expertise	20/12/2015	OPS	Medium	Medium	Medium	The specific agreement stipulates that SAKIRP is implemented in own management	Gaudisart Patrick	N/A	The is generally no systematic objection of working with non state actors. The RAA is supportive. The challenge is to find service providers with expertise, reasonable costing and long term business perspectives in Kigoma.	Completed

									business perspectives in Kigoma.	
High default rate of in kind input credit scheme leads to unsustainable value chain financing or indebted farmers. Factors are : generally low credit discipline, electioneering, high risk due to unpredictable weather patterns.	01/08/2019	DEV	High	Medium	High	Farming as a business coaches support groups Groups screen their individual members credit readiness Only farmers with good production standards have access to credit	MUSIN AMWA NA Earnest	N/A	12 Farming as a business coaches deployed Credit officer employed Groups screen their individual members credit readiness Only farmers with good production standards have access to credit	In Progress
Climate change impacts negatively on production and quality of crops	30/10/2019	DEV	High	High	Very High	Promote climate resilient agronomic practices (contour lines, resilient varieties, staggered planting, restoring organic matter)	District Focal Point	N/A	training planned 2020-Q2 and adoption in demo and multiplication plots	In Progress
						Adoption third value chain: sunflower has bigger resilience and requires less inputs	BIKOR A Daniel	30/06/2020	seed purchased, linkage private sector established, farmers mobilised, demos planned	In Progress
The government decision to close the refugee camps in Kigoma reduces the local markets for smallholders and the collaboration agreement for structured markets with WFP	05/11/2019	DEV	Medium	Medium	Medium	Liaise with WFP - see markets beyond refugee camps in Kigoma - also school feeding programs and Sudan/ Uganda	Lawassi Claude	N/A	voluntary repatriation is high on Tz and Burundi government agenda	In Progress
						Maintain contacts with other buyers (RV, Nairobi, Kaderes)	MUSIN AMWA NA Earnest	N/A	regular phone calls but companies not interested in investments in production and aggregation	In Progress
cassava market is in a structural slump - 150- 200 Tsh/kg dried cassava make investments in the value chain difficult. Prices dropped with 75% since formulation	30/09/2018	DEV	High	High	Very High	Look for new markets RDC, Rwanda, Chinese firms	MUSIN AMWA NA Earnest	N/A	Chinese firms pay low prices, quality standards are high and transport cost to DSM are high. Chinese exports are not an option for Kigoma	In Progress
Targets of bridge construction are not met because of slow contribution of stones by community and inadequate number of	31/03/2019	DEV	Medium	Medium	Medium	Offer combined contracts to masons so they move between sites with stones / no stones	MNGU MI Emmanuel	N/A	contracts are clustered for masons that performed well	In Progress
						Engage political and executive leaders	Chilonwa	N/A	MoU signed , mobilisation meetings in Kigoma	In Progress

experienced masons							Jacob			
						Train masons on the job, liaise with VETA, publish work in local radio stations	MNGU MI Emmanuel	N/A	16 masons trained but only 4 really able to adhere to quality standards and handle contract independently	In Progress

6. Synergies and complementarities

6.1 With other interventions of the Portfolio

The portfolio focuses on other Enabel projects. There are two other Enabel projects in Kigoma and one in Arusha. In general, the synergy with other Enabel projects can be improved.

NRM4LED – Natural resources for economic development project – Kigoma

During the field work, SAKIRP staffs encounter intensive deforestation which has been reported systematically to the project manager of the natural resource project. SAKIRP is not supporting any farmer groups that cultivate in forest reserves or other conservation zones. SAKIRP has been promoting contour ridges in an effort to stem erosion, replenishment of ground water and climate change resilience. The construction of bridges is increasing access to markets and services but also trade of forest products and hence deforestation. SAKIRP has liaised with natural resources projects to avoid opening up ecologically sensitive zones to increased transport.

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.

Maisha Bora pastoralist project – Arusha

SAKIRP and Maisha Bora regularly share experiences regarding digitalisation and monitoring & evaluation. SAKIRP has provided advice to one of the Maisha bora partners Iles de Paix. Through knowledge sharing programs organised by Maisha Bora, the SAKIRP technical team been exposed to private sector business models in other parts of Tanzania. Important stakeholder contacts were also obtained through this way.

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

Currently there are no third-party donor agreements executed by Enabel in Tanzania.

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 the Local Investment Climate (LIC), AGRA TIJA Project, 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. This collaboration has also seen quality management and weighing equipment purchased by the AGRA project being used by farmers supported by SAKIRP. 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 delivery of smallholder beans to the WFP procurement system is being piloted by SAKIRP. The aim is to deliver at least 500 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.

SAKIRP has also collaborated with the Belgian private sector for the marketing of beans. During one season, 2 containers of beans were exported to Casibeans in Merelbeke. Unfortunately, the trading of beans through Casibeans could not continue given the limited volumes, smallholder farmers not able to address the quality requirements of the long value chains and high expectations versus limited own commitment of the firm.

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.

7. Transversal Themes

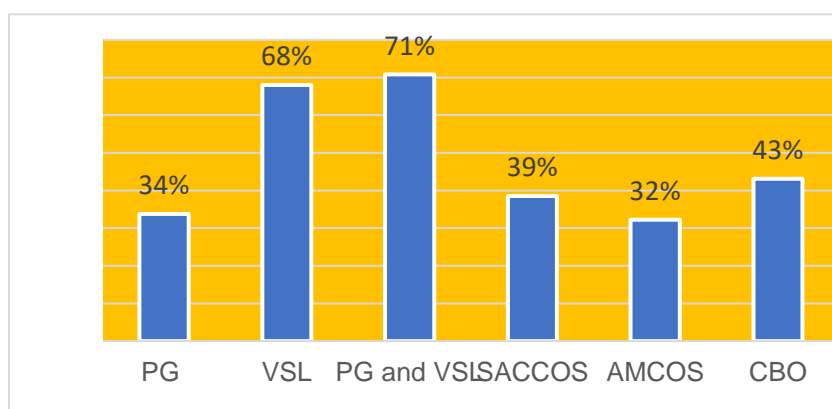
7.1 Gender

Efforts have been made to mainstream gender considerations at different stages of the project. Currently SAKIRP reaches out to about 14,000 farmers and 68% are women.

The high female participation was achieved through:

- Selection of value chains in which women have the biggest participation i.e. beans and cassava.
- Selection of groups with the highest membership of women i.e. village loan and savings associations – VICOBAAs. The strong participation of women hinges on the selection of VICOBAAs during the initial diagnostic survey of producer groups. The graph below shows percentages of women participation by type of producer group.

Graph: Participation of women in groups, by group type



Source: SAKIRP diagnostic survey

District	Male (adult)	Female (adult)	Male (youth)	Female (youth)
Buhigwe	21%	56%	7%	16%
Kasulu	21%	58%	6%	15%
Kakonko	24%	54%	10%	12%
Kibondo	25%	54%	9%	12%
Kigoma	25%	57%	5%	12%
Uvinza	30%	51%	7%	13%
Total (%)	24%	55%	7%	13%

Gender concerns are mainstreamed in all project activities and processes. To advance women participation and access to services, the project is going beyond targeting women-centred groups to actively advocate for equitable gender representation in farmer group decision-making and leadership. Scheduling of project activities such as meetings and training are done to accommodate women's special needs. In structured production and marketing arrangements, aggregation centres are selected so that they are easily accessible to women participants.

The SAKIRP interventions allow for strengthening qualitative participation of women in the value chain and in decision-making in the farmer producer groups. Gender considerations were mainstreamed in the "farming as a business" manual. SAKIRP data collection tools are gender-segregated. The gender mainstreaming manual was prepared and all lead farmers received special training on gender mainstreaming. The following action points were agreed during the training:

1. Data recording by gender for every intervention done by the lead farmer at the group level.
2. Sensitize and encourage participation of women in training activities
3. Facilitate review of the group by-laws to introduce the clause for the 50-50% in leadership positions.
4. Identify beans and cassava women traders within and outside the groups

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

Output Indicator	Female	Male
General engagement with project	68%	32%
Lead Farmers (extension service by farmers)	40%	60%
Group chairperson	44%	56%
Group secretary	47%	53%
Training participation	72%	28%
Farmers participating in contract farming/ structured markets	42%	58%
Ward extension officers	11%	89%

Gender equity and participation concerns have been considered in the choice of end markets. In combination with external, domestic market segments were included for both value chains as they are more accessible to women.

The project M&E system as well as the related household surveys produce gender disaggregated data in a consistent and regular way.

The following pilots targeting female businesspeople were run:

In the initial phase, a good gender spin-off was expected from cassava grating technology focusing on urban women processors. The assumption was that mechanised processing would improve quality, reduce the drudgery on women and create an additional income of high-quality cassava flour. Unfortunately, during the pilot the technology did not take off because of the slump in cassava prices, limited local market and the customer preference for fermented cassava. In the end, women want also to use their own labour. They do not want to see it replaced by expensive machines.

In the bean value chain, thresher and cleaning technology was being tested to reduce the time that women spend threshing and winnowing beans. The most appropriate technology was sieving table which improves the quality and efficiency of bean grading – a process that is usually undertaken by women. It helped that women were able to reach export quality under the Casibean pilot.

The sunflower value chain will be piloted in 2020. From the initial survey, 98% of the interviewees stress that they grow sunflower to process and sell their own vegetable oil. Women are processing the sunflower seeds and retailing the oil obtained from the mill at local markets. It is an important income generating activity. There is also a cost saving on household expenditure if own cooking oil can be grown at home. The sunflower seed cake is an important feedstuff for the local poultry and pig raising. It will add value to a female dominated sector of the farming system.

Within the remaining project framework and given the serious MF limitations, the MTR recommended that SAKIRP should provide revolving loans to farmer groups and VICOBAS. Preferential conditions for women within mixed groups or women groups would support women's participation towards VC development. The preferential loan conditions and financial linkages would also address the access to a critical production factor at the root of gender inequalities (MTR report 2019). The trouble is that the track record of group revolving funds is poor. It will require to focus on the groups with the best performance indicators. For instance, the participation of women in structured marketing dropped from 60% in the 2018/19 season to 42% in the 2019/20 season due to a tighter credit eligibility screening by the groups after poor credit repayment of the first batch.

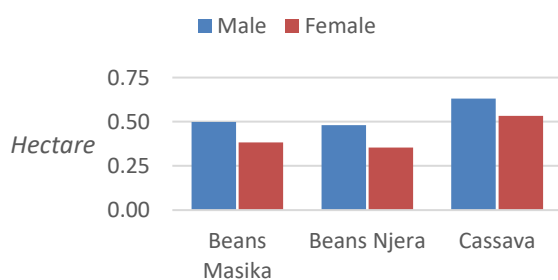
The project M&E system as well as the related household surveys produce gender disaggregated data in a consistent and regular way. The 2019 household survey revealed that there is still a gender discrepancy for some of the outcome indicators, as illustrated in the table below. Notable gender discrepancies are mainly found for land area under cultivation and achieved yields, consequently resulting in an even larger discrepancy in income derived for the sales of crops. Regarding technology adoption, engagement in collective marketing and access to agricultural finance on the other hand, considerable gender equity was observed.

An extra survey was organised targeting female head households (FHHH) as a specific sample. As expected, the outcome for FHHH is in line with the gender discrepancy mentioned earlier, in terms of land area under cultivation, yields and consequent income derived from the sales of crops, being lower than for that married women (as outlined in the table below). Other than that, also awareness of improved seed availability and technology adoption are significantly lower. On the other hand, the survey of FHHH also revealed some rather unexpected outcome such as the higher engagement in collective sales and share of produced beans sold collectively (see table below). FHHH were also more positive about collective marketing in terms of its contribution to their household income.

Indicator – Dec 2019	Average	Male	Female	Female deviation ¹¹	FHHH ¹²
Annual household income derived from cassava by beneficiaries	526,402	618,068	439,294	-17%	407,753
Annual household income derived from beans by beneficiaries	411,935	501,419	325,577	-21%	299,469
% adoption of cassava improved varieties by smallholder beneficiaries	13%	14%	12%	-1%	15%
% adoption of beans improved varieties by smallholder beneficiaries	23%	26%	21%	-2%	16%
% adoption of good post-harvest practices for beans by smallholder beneficiaries	75%	82%	69%	-6%	67%
Land area under cassava (ha)	0.58	0.63	0.53	-8%	0.48
Land area under beans (ha)	0.43	0.49	0.37	-14%	0.33
Yield of cassava [MT/Ha]	3426	3727	3151	-8%	3351
Yield of beans [Kg/ha] – general	543	573	513	-6%	502
% of beneficiaries engaging in collective cassava marketing	5%	5%	4%	-1%	5%
% of beneficiaries engaging in collective bean marketing	6%	8%	5%	-1%	7%
Share of produced cassava sold collectively	4%	5%	3%	-1%	3%
Share of produced beans sold collectively	5%	5%	5%	0%	12%
% of beneficiaries with access to informal agricultural finance	24%	24%	24%	0%	22%

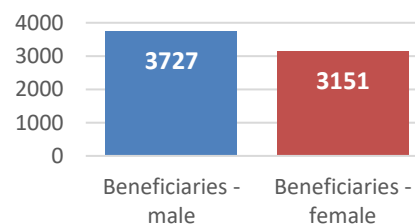
Source: SAKIRP household survey 2019

Gender difference in land cultivation – acre/ha.



Source: SAKIRP household survey 2019

Cassava yield by gender (kg/ha)



Challenges

- ✓ Limitation to access formal loans by smallholder farmers, including women, to finance value chain activities for increased yield to allow them to participate effectively in the market
- ✓ To facilitate women, access and control over the production resources such as land is out of SAKIRP's mandate and cannot easily be achieved within the project life time. It has a cultural constraint rather than legal issues.
- ✓ Resistance to adopt labour reducing technologies such as recommended herbicides and mechanization. Promotion is going on to enhance adoption.

On the whole, the gender and women empowerment will need to be stepped up to enable both men and women to equitably control value chain activities and benefits.

¹¹ Female deviation = deviation from the mean as percentage

¹² FHHH = female headed household

7.2 Environment and climate change

Climate change

Kigoma region (as other areas in East Africa) has experienced drastic changes in weather patterns. The 2018-19 season was too dry while the 2019-20 season was too wet with flooding and high disease pressure. Flooding is enhancing soil erosion and destroying the rural road network.

The change of weather patterns has a profound impact on the profitability of agriculture:

- The usual short dry seasons of Jan-Feb is not reliable anymore. As a consequence, beans and maize cannot be dried properly leading to large post-harvest losses.
- The start of the planting season late October / beginning of November is no constant factor anymore leading often to delayed planting and for some wards crop failure.
- High rainfall increased the disease incidence.

Concrete actions to tackle the effects of climate change are:

- Adoption of climate smart agriculture in the refresher courses of extension workers.
- Systematic promotion of contour lines as a good agronomic practice.
- Beans are particularly sensitive to too much or not enough rainfall. Sunflower will be adopted as a third value chain. Sunflower is more resilient to adverse weather conditions and reduces the risk for smallholder farmers. It requires much less investments in inputs and production costs.

Environment

SAKIRP is mainstreaming the environmental issues in its activities. There are strong linkages between environment and LED and agriculture. With the demographic growth, expansion of agricultural production relies heavily on further cultivation of miombo woodlands in Kigoma region.

	Buhigwe	Kakonko	Kasulu	Kibondo	Kigoma	Uvinza	Total Region
Conservation zone in vicinity?	26%	43%	56%	63%	25%	83%	50%
Average Distance [km]	4	3	9	4	5	5	5
Encroachment problems encountered *	16%	24%	46%	16%	36%	33%	40%

* Note that the percentage of encountered problems are calculated for the groups in the vicinity of conservation zones only.

A lot of cassava, maize and bean cultivation is taking place in miombo forests. Cultivation has often reached the borders of Moyowosi game reserve and forest reserves. Smallholder farmers will encroach wetlands and forest & game reserves in search for free and fertile land. There is strong political pressure to de-gazette conservation zones and allow agricultural production. In the highlands, there is increased risk of soil erosion. The southern wards of Uvinza in Uvinza are in a last frontier zone where pastoralists and farmers are cultivating the last patches of miombo forests in the open areas.

Demos and multiplication plots in conservation zones are not supported by the project. Emphasis will be put on soil & water conservation and proper land use on existing cultivated land. Ridging along the contours of cassava plots and the association with leguminous crops at the end of the rotation can have an important conservation impact if applied on a regional scale. Cassava is relatively tolerant of poor soil fertility management by smallholder farmers and drought. It is therefore seen as a crop that contributes to the resilience of smallholdings in the context of climate change.

Pesticides are an important factor to increase farm and labour productivity. SAKIRP advises on the proper use of agricultural inputs to mitigate their environmental damage. The use of fertilizer is not an environmental threat given the small amounts that are used. The use of fertilizer will allow for a better and faster closed canopy of the crops thereby limiting water runoff and erosion. Fields with well managed soil fertility reduce the need for further cultivation of miombo forests and wetlands. Beans are the only leguminous crop in the crop rotation of smallholder farmers in Kigoma and their further promotion will add to nitrogen fixing and maintenance of soil fertility albeit on a limited scale.

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.

With regards to the project operations, the biggest environmental foot print is the carbon emissions of the flights between Kigoma and Dar es Salaam and Europe for staff, consultants and backstopping. Backstopping by Skype and WhatsApp reduces the need for travel. An additional pollution factor is the use of heavy 4*4 vehicles even on tarmac roads. Three more fuel efficient hiluxes were purchased instead of heavy landcruisers. The use of motorcycles is encouraged where appropriate. Staff have been advised to use a fan instead of energy wasting air conditioning. Establishing a regional transport pool rather than operating individual project cars will further contribute to efficiency. Printing is very much reduced – most data storage and communication is done by ICT. Efficient use of electricity, water and transport will reduce waste and pollution. It is expected that the Enabel green procurement guidelines will provide best practices in the future.

7.3 Digitalisation

A digital Monitoring and Evaluation (M&E) system was installed since the very start of the project. Digital technologies enabled a more efficient and reliable M&E system, and in addition to that even broadened its scope beyond the expectations of conventional M&E systems. Next to data collection for indicator progress tracking, this technology enabled digital M&E system was designed to also improve extension service delivery to smallholder farmers and allow for real-time feed-back from targeted beneficiaries.

For instance, agronomic extension information (e.g. integrated pest and disease management recommendations) and automatic calculation tools (e.g. yield forecasting) built into the data collection tools, improve the quality of agronomic extension service delivery. On the other hand, real-time feed-back from beneficiaries (e.g. disease outbreaks) sent by extension workers through the mobile data network allows for faster project steering and decision-making by the PIU, corresponding to the needs in the field.

Data collection, communication, coordination, logistical planning, etc. is mostly done through the use of smartphone applications such as WhatsApp and KoBo Toolbox (a free and open-source tool for mobile data collection), used by all project staff and government officers involved in the project.

Smartphones in general strengthen its users by:

1. improved access to information (internet, KoBo toolbox),
2. ability of real-time qualitative data reporting (e.g. pest and disease outbreaks),
3. WhatsApp groups per district serving as effective agronomic question & answer forums.



KoBo Toolbox enables the project to aggregate all this data real-time into a central cloud-based server. From there, data sheets and automatically generated reports can be accessed by any staff member of the project and to some extent by District Agricultural Extension Workers. As data from the field is reported on a daily basis by ward extension officers, a real-time picture of the field situation can easily be drawn at any time. The KoBo Toolbox platform allows basic users with low computer literacy to access automatically generated reports, whereas proficient users can draw georeferenced data compatible with GIS software, allowing for more advanced geospatial interpretation of reported data.

Digital mobile Africa has partnered with UNCDF in Tanzania for demand aggregation and input purchase. Farmers can subscribe and make savings. Input suppliers can obtain economies of scale through bulking of fertilizer and pesticide orders of fragmented smallholder farmers' demand. SAKIRP will join the digital platform in 2020.

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 and weeding. 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 (Casibean, WFP) 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> <ul style="list-style-type: none"> • Low productivity is currently the main constraint to value chain transformation for beans and cassava. Increasing productivity is an absolute pre-condition for attaining price competitiveness and increased household income. • The success of structured marketing arrangements depends on farmers' ability to produce enough to meet buyers' quantity requirements. Most agreements with smallholder farmer fail because not enough produce is available. a) Underdeveloped agricultural input supply systems constitute a weak link in structured marketing arrangements. Input supply system strengthening should be prioritised earlier along the value chain development cycle b) Climate change is a reality for smallholder farmers in Kigoma. Traditional cropping patterns cannot be relied upon anymore. The increased risks are impacting on yields and quality especially for beans. Sunflower which is a more resilient crop will be piloted in 2020. Pending a successful trial outcome, sunflower will become a third value chain to be supported. The climate change risk mitigation mechanisms must be systematically addressed at policy level. 	<p>Min Agriculture VCD projects</p>
<p>2. Value chain actors</p> <ul style="list-style-type: none"> • The value chain development model remains a difficult undertaking in a context of smallholder farmers, fragmented production/ markets and remote regions such as Kigoma. Companies refer to high costs of working with smallholders, poor quality, risk of side-selling and high expectations. The recent pull-out of GAFCO & Casibean and the reluctance of other firms to fill the gap are indicators of the precarious viability situation. • Regional and national level buyers are already embedded within the local market through the agency of informal market intermediaries who pass on information about local supply opportunities. Therefore, a value chain transformation model that leaves out local market intermediaries is bound to face resistance and disruption. • Exclusive focus on smallholder farmers undermines the business viability and sustainability of structured market linkages. Supporting smallholder farmers is a high cost approach because of the low input-output ratio. A hybrid model that combines medium and large-scale farmers with smallholder farmers is better proposition for agribusiness firms • In Kigoma region, farmer field schools are few and they have been dormant waiting for the next round of ASDP funding. The TFF assumption that FFS are the essential building blocks for strong farmers' organisations does not hold ground. A systematic assessment of the existing producer groups and SACCOs (market orientation, management, social coherence, leadership, risk mitigation) will identify the most reliable partners and the capacity gaps. Farmers' organisations are weak in Kigoma region and will not provide for the driving force of the value chain development. 	<p>VCD projects DAICO Cooperative officers</p>
<p>3. Local government extension service. The MTR commended SAKIRP for its support to the local government extension system for reasons of sustainability and operational costs. The capacity building offered will indeed outlive the project lifespan and will benefit other value chains. On the other hand, on average only 40% of the ward extension workers have been able to fully absorb the opportunities offered by a development project like SAKIRP. WAEO's personal commitment and effective human resources management of the DAICO's are critical factors.</p>	<p>Local government VCD projects</p>

<p>4. Value chain financing</p> <ul style="list-style-type: none"> • Access to capital is a cross-cutting factor conditioning value chain development. It is necessary to acquire inputs, invest in efficient agricultural practices, processing equipment and crop aggregation. • The provision of loans to smallholder farmers must be highly selective. The loan selection criteria must be enforced at both group and individual farmer level. The inclusion of uncreditworthy individual farmers will undermine loan repayment and affect the performance of the whole group. • Provision of agricultural credit should go alongside provision of consumption credit to obtain the best results. Challenges of side-selling are mostly a result of lack of consumption-smoothing finance. • Any loan support must be done on the back of proven agronomic performance and readiness to produce at the required productivity levels. Farmers that have not mastered good agricultural practices must not be given loans to produce for the market • The project must not be perceived to be the credit provider as this leads to opportunistic behaviour and negatively and adversely impacts loan repayment. Development projects are widely perceived as sources of subsidies. • Any loans to farmers must be backed by multiple forms of collateral which should be enforced to avoid setting bad precedents. • Provision of loans to support in-kind credit must be completed with adequate arrangements for pre-financing aggregation. Lack of pre-financing prejudices loan recovery as farmers under-deliver and side-sell produce • Peer monitoring of farmers must be strengthened alongside continuous efforts to educate farmers about the importance honouring credit obligations. 	<p>Financial service providers</p>
<p>5. Structured market arrangements</p> <ul style="list-style-type: none"> • Export value chains are too complicated for smallholder farmers. A stepwise approach which prioritises national markets is more practical and less risky. While export markets appear to be lucrative, it is advisable to use national markets to build smallholder capacity and target export markets in a latter phase. If export markets are targeted from the onset, it is important to enlist the services of experienced intermediary firms. • Arrangements for aggregation must be elaborated from the initial planning stages of structured marketing arrangements to reduce the risk of side-selling and increase the attractiveness of collective marketing to farmers • Appropriate and flexible value chain financing services are indispensable to the success of efforts to integrate farmers in value chain • Also, in a smallholder setting, the participation of medium scale farmers is important to manage the production volume risk and obtain economies of scale. Medium-scale farmers have the capacity to mobilise their own production resources, deliver significant volumes and honour contracts with firms. • In areas where there are weak apex farmer organisations, intermediary firms with capacity to aggregate and pre-finance commodity trading are indispensable and constitute a critical success factor. The involvement of experienced intermediary firms in linking farmers to structured markets is unavoidable if the aim is to reach a larger number of farmers without resorting to huge subsidies. Smallholder farmer organisations are a slow and high cost channel strategy for projects; the needed upfront investment in capacity development is substantial. 	<p>Private sector Min Agriculture DAICO</p>

<p>6. Cassava markets and processing</p> <p>a. Cassava producers in Kigoma are largely disengaged from the value addition process. Albeit the media hype of Chinese companies and value addition, cassava processing and export to China did not take off. Even with the current low prices, the Burundi makopa market remains the best rewarding option especially with storage or delayed harvesting till October.</p> <p>b. The cassava price slump is structural as production improved in Burundi and Rwanda. The boom years of 2014-16 might not return. Under these conditions, attaining high yields through good agronomic practices and controlling virus diseases is essential for the sector.</p> <p>c. Cassava brown streak virus is expanding and the high yielding Mkombozi variety is susceptible. Even TOSCI certified cuttings from research and commercial seed entrepreneurs are sometimes infected and spreading the disease from one region to the other. The production of double tolerant varieties such as Tz 130 and Chereko needs to increase drastically to meet the demands on the ground.</p>	<p>Agricult projects Min Agriculture</p>
<p>7. Bean quality and marketing</p> <ul style="list-style-type: none"> • Farmers are generally able to meet the stringent export quality requirements if coaching, sieving tables and price incentives are in place. Producers appreciate the value addition at farm level. • Mechanised bean cleaning technology has not made a headway amongst bean trading companies. Tarpaulins, sieving tables and hand picking remain the tested formula due to high cost of imported equipment, poor local manufacturing and workers management. • Erratic weather patterns not only affect bean yields, but make it more and more difficult to dry the produce properly at the end of the first rainy season. While bean weevils are the major threat in July, high humidity levels and moulding are the main challenge in February. • VC development tends to be easier when working with high value-added products. It makes margins easier to generate at low tradable volumes. Therefore, it can be undertaken at a smaller geographical scale or with a smaller number of stakeholders. Where lower value products are concerned and possibilities of generating added value through post-harvest management or transformation are limited then it is necessary to trade higher volumes of product to generate satisfactory revenue. Stakeholders are also more liable to market fluctuations hence the trade is riskier (MTR report 2019). 	<p>Min Agriculture Bean trading firms</p>
<p>8. Mobile data collection and digital tools</p> <p>a. Digital tools enhance the efficiency and timeliness of data collection. There are however limitations to remotely supervise field staff and regular supervision of the data quality remains important.</p> <p>b. Most agricultural market information systems have failed to outlive their sponsoring projects due to lack of viable business model to sustain them. Social media, especially WhatsApp, represent a better opportunity for agricultural communities and value chain actors to generate and share valuable market information</p>	<p>Agricult projects Min Agriculture</p>
<p>9. Agricultural commodity storage structures</p> <p>Many storage structures built under DASIP remain unused because of a poor commercial location, ownership by village government and lack of market linkages. It is not the farmers that seek large storage capacity for agricultural produce but private traders.</p>	<p>Local governments Min Agriculture</p>
<p>10. 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>	<p>TARURA Reg.road board</p>

<p>11. Enabel private sector strategy</p> <p>Although Enabel’s new development strategy insists on support to private enterprise, it does not have the tools to put this orientation into practice. SAKIRP is a point in case where the value chain financing grant and the private sector investment fund could not be implemented because of the missing Enabel modalities - impacting very negatively on project performance. For SAKIRP, it is already too late. For future VC support interventions, Enabel needs to dispose of a set of tools enabling it to support private sector actors more effectively (MTR report 2019).</p>	<p>Enabel board of directors DGD</p>
<p>12. Length of value chain support</p> <p>Value chain support needs to be considered over a longer term, particularly when undertaken with smallholders. A 5-year period is too short. This can be explained through several factors. It is generally necessary to boost production to generate tradable volumes of product before you can fully work on marketing. It implies long processes of farmer organisation support which alone can ensure quantity, quality and regularity of production, key elements to successful agricultural product marketing. Value chain development is rarely a smooth and linear process. Likely market fluctuations (cassava market crisis...) need to be considered by working over a longer period (MTR report 2019).</p>	<p>Enabel board of directors DGD</p>

9. Steering

9.1 Changes made to the intervention.

The major change made to the intervention was **the approval of a pilot for sunflower as a third value chain**. The existing 2 value chains face serious 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 the adverse weather patterns of 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.

The selection of sunflower as a third value chain for SAKIRP was informed by consultations made with smallholder farmers and agricultural stakeholders within the region. The mid-term review team explored the question of an additional value chain and sunflower emerged as the top preference for most of the actors consulted. The project weighed these preferences against other practical considerations and settled for sunflower for the following reasons:

- Sunflower is a crop that is already known to farmers in Kigoma: this crop was formerly promoted by Concern Worldwide and private firms such as the Great African Food Company which contracted smallholder farmers in Kakonko district. Across the region, there are farmers that producing and processing sunflower for home consumption and income generation. 70% of the surveyed sunflower farmers in Kasulu are expanding their acreage because of the good income.
- Sunflower has lower production cost than other main crops in Kigoma. Its input needs and costs are considerably lower and makes the crop affordable to smallholders
- Sunflower has clear value addition opportunities through oil pressing which produces a tradable bye-product in the form of seed cake as an animal feed ingredient. At local level, sunflower producers can also add value and improve their income by using seed cake for poultry and dairy production.
- There is a clout of private small-scale sunflower processors which can be leveraged for promoting private sector-led value chain development. On a larger scale, Alliance Tobacco is diversifying into sunflower in its former tobacco-supplying areas in Uvinza. This presents an opportunity for forging a scalable structured marketing relationship.
- There are seasonal production complementarities between sunflower and beans; introducing sunflower mitigates the risk of producing beans in the short season or leaving the land fallow.
- Promotion of sunflower in Kigoma aligns with the national sunflower development strategy which identifies Kigoma as a sunflower producing region
- Local demand for sunflower oil is increasing due to better product awareness
- Sunflower is drought resistant due to its deep tap root system. It can therefore be planted in less fertile and semi-arid area. Sunflower is a crop that helps smallholder households to deal with the adverse weather patterns of climate change.
- The processing technology is generally affordable and available – mostly from China, India, as well as from local manufacturers such as the Small Industries Development Organization (SIDO) among others.
- In other regions, the sunflower value chain has been supported by several projects (AMDT, Concern, LIC). This experience can be leveraged to build sustainability for farmers in Kigoma

Based on the reasons cited above, the adoption of sunflower as a third value chain is a logical and strategic response to the challenges that the project is facing and, equally, an opportunity to enhance the quality of outcomes through crop diversification and risk mitigation. The presence of sporadic sunflower production and processing activities on the ground presents ideal conditions and foundation for scaling up and strengthening a locally-driven value chain so that it can benefit more smallholder farmers across the region.

This will only take effect in 2020 – however improved sunflower hybrid seed was purchased in 2019-Q4. The outcome of the pilot in Feb-July 2020 will determine whether the sunflower value chain is scaled up.

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
Assist with the digitization of the ARDS primary data collection systems as a small pilot in one district	18/10/2018	Steering Committee	Assess mobile data collection needs for ARDS & training extension staff of 1 district on Kobo toolbox	DENAYER Anthony	19/05/2019	training done in Kigoma DC and pilot prepared	Completed
			Roll out ARDS data collection/ validation based on Kobotoolbox 1 season	KIMENA Deogratius	N/A	14 WAEOs Kigoma DC collected data : pilot + 1 season, district and regional data validators trained in data cleaning. Data uploading from Kobo-toolbox needs template Min Agriculture which follows bureaucratic procedure. Mobile data collection offered time and cost benefits in Kigoma DC	In Progress
Refocus the investment fund from central markets to aggregation centres and bridges for access to markets	18/10/2018	Steering Committee	Construction of bridges to enhance market access	HOLLEVOE T Steven	N/A	12 bridges finalised , 2 district bridge survey completed, links with TARURA firmly established. Folder and manual developed. Bridge component firmly anchored in SAKIRP workplan for remaining period.	Completed
Assess possibility of pilot bean grading at farmer level for value addition	30/03/2017	Steering Committee	Test technology of bean cleaners and threshers	MUSINAM WANA Earnest	N/A	3 cleaner & threshers procured. Field testing was done in Feb 2019. Quality Intermech machinery needs considerable improvement: local manufactured bean cleaner good speed but low quality, thresher output too low. Tractor operated equipment beyond purchasing power local farmers. Sieving tables, moisture meters and tarpaulins are the appropriate technology under smallholder conditions	Completed
			Collaboration private sector - Casibeans & Third Man for bean export	MUSINAM WANA Earnest	30/09/2019	Pilot for export 50 T in May 2019 ongoing. Farmers trained on bean quality & management aggregation centres. 2 containers exported. Batch in July not accepted because of weevil incidence, Casibeans pulled out due to low levels of produce, high cost fragmented smallholder logistics, high bean prices Kigoma and quality constraints.	Completed
Ensure that the district focal point reports to the relevant local government bodies (CMT & standing	01/03/2018	Steering Committee	Submit SAKIRP plan to planning cycle district council	District Focal Point	N/A	ongoing - regular monitoring required	Late

committees) and that SAKIRP is integrated in the PlanRep.							
Resolve human resource bottleneck at agricultural department in Uvinza district - RAS	31/08/2017	Steering Committee	Discussion Uvinza district and request additional staff from PORALG	Mchatta Rashid	N/A	Suspended staff were reinstated but then left the district. Uvinza DAICO office understaffed.	Late
Co-opt steering committee member of the agri-business sector	06/06/2017	Steering Committee	Look for effective private sector representative for the steering committee	HOLLEVOE T Steven	01/06/2018	AMDT representative participated in SC October 2018. However availability is limited.	Completed
Constitute a regional facilitation team that will monitor SAKIRP activities on a bi-annual basis.	22/02/2018	Steering Committee	Compose regional monitoring team made of relevant regional departments.	Rubuye Josephat	30/03/2018	Team was constituted and executed 5 monitoring visits. Need to improve composition team and clarify mandate.	Completed
Provide LGA with fuel to for project monitoring visits	22/02/2018	Steering Committee	Fuel & allowance allocation for participating local governments for SAKIRP monitoring	Rubuye Josephat	30/04/2018	allowances / fuel issued twice. Need for better reporting and templates.	Completed
The PIU should liaise with DED's office to ensure that bolder action on non-performing LG extension staff so that services are provided at producer level	15/03/2019	Steering Committee	compilation monthly/ annual performance report, discussion with DFP and DAICO and follow-up of LG personnel regulations to deal with recalcitrant WAEOs.	Rubuye Josephat	31/05/2020	Monthly data on WAEO performance are compiled. Annual report 2019 has been elaborated. Some districts (Kakonko, Kasulu, Buhigwe) took action to replace non performing WAEOs but there are not enough extension workers.	In Progress
The feasibility of another value chain (e.g. palm oil) should be assessed during the mid-term review	15/03/2019	Steering Committee	Assess whether third value chain makes sense for poverty alleviation & value chain development	HOLLEVOE T Steven	30/09/2019	Steering committee adopted sunflower instead of palm oil as pilot in 2 districts, Sunflower also contributes vegetable oil sector,, can be grown more agro-ecological zones, quicker results and suitable small holders.	Completed
Request for a no-cost extension period of the Specific Agreement for 1.5 year to the relevant Tanzanian and Belgian authorities.	18/09/2019	Steering Committee	Document requesting project extension (justification, objectives, budget implications)	HOLLEVOE T Steven	31/03/2020	Draft narrative section presented. Budget projections in progress - pending closure UBW-2019. Project extension was discussed with several stakeholders in Tanzania.	In Progress
Adoption of sunflower as a 3rd value chain to have better opportunities for value addition and smallholder income improvement: strategy & sunflower market analysis before November 2019 and a pilot in 2 districts in Feb 2020 season.	18/09/2019	Steering Committee	Conduct pilot of sunflower production and market linkages in 2 districts.	BIKORA Daniel	31/07/2020	Survey of 70 farmers conducted. Concept paper submitted steering committee. 6 tons (hybrid & open pollinated varieties) for pilot in Kasulu and Kakonko district. Seed distributed in 16 wards. Collaboration with 3 sunflower press established. Linkage with hybrid seed producer Silverlands established for seed supply and on farm demos in 2020-Q1.	In Progress
Approval of loan facility for the trader's business membership organisation	18/09/2019	Steering Committee	Explore feasibility of grant agreement for loan co-guarantee fund in the remaining project period	HIEN Naloyare	15/03/2020	Discussion Enabel HQ and potential partner PASS to better define modalities	In Progress

Approve the expansion of stone arch bridge construction in function of economic importance and community commitment to mobilize the local contribution.	18/09/2019	Steering Committee	Stone arch bridges are promoted amongst TARURA district offices, craftsmen trained, building supervisors recruited and number of bridges increased.	HOLLEVOE T Steven	N/A	70% of TARURA district offices have joint. Uvinza and Kigoma have embraced technology with a lot 3 districts came to understudy the technology. 12 bridges finished. 8 under advanced construction. >70 sites surveyed. 2 building supervisor recruited. 16 masons trained. Brochure and manual in Kiswahili developed.	In Progress
Give priority to quality: focus capacity building efforts on best 15% groups that meet minimum requirements rather than looking for 20.000 farmers and large geographical area with no chances of result consolidation	30/09/2019	External Review	Adoption of midterm review by steering committee and integration in workplan 2020.	HOLLEVOE T Steven	N/A	MTR recommendation was adopted by steering committee. No additional wards were added. New guidelines were communicated to DFPs and DEDs. The work plan 2020 and structured marketing arrangements focus on best producer groups. In May 2020, performance wards will be reviewed and some wards might be dropped.	In Progress
An audit should be plan in Q3 2020.	13/01/2020	CAP - Country Action Plan	There are no Actions available.				

9.3 Strategic re-orientations

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 TTF 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.	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.	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. T Sunflower was adopted as a third value chain because: <ul style="list-style-type: none"> • Offers a better income than cassava • Is more 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) • Good fit in crop rotation – use additional season 	Yes, meeting 20 th September 2019

9.4 Recommendations

Recommendations	Actor	Deadline
1. Expand the scope of value chain engagement training to cover informal intermediaries to encourage system-wide behaviour change. The cooperation of local intermediaries is indispensable to the development of structured and efficient markets.	PIU	2019-Q3
2. Allow flexibility in the project targeting strategy to allow for a hybrid targeting strategy that is inclusive of medium-scale farmers that do not fall into the poor category.	JLPC	JLPC Meeting 2019 Q1
3. Promote the adoption of a value chain financing approach through convening a coordination working group to share lessons and experiences	PIU	2019 – Q3
4. Expand the use of anchor farmers to the multiplication of improved cassava cuttings	PIU	2019-Q4
5. Improve the logistics related to the processing of cassava cuttings from sub-contracted suppliers of ARI Maruku so that the quality and vigour adheres to the required standards and that no additional financial burden is caused to clients.	ARI Maruku	ongoing
6. Step up the certification of cassava commercial seed entrepreneurs and the verification of the quality of the produced cuttings. 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.	TOSCI - MEDA	ongoing
7. Adhere to minimum standards to contain the spread of cassava brown streak virus i.e. QDS production fields that are CBSV infected and its distributed should be immediately destroyed.	TOSC ARI Maruku	ongoing
8. Belgian development aid will focus more on private sector development. The approval of the tools (grants to innovative private sector proposals, support to micro-finance) need to be expediated so that Enabel can fulfil this new	Enabel HQ DGD	ongoing

Please see also lessons learnt which can be interpreted as recommendations.

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
	√			
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.		
	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).		
√	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
		√		
2.1 How well are inputs (financial, HR, goods & equipment) managed?				
	A	All inputs are available on time and within budget.		
√	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
√	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.
√	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
		√		
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.		
√	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?				
√	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
		√		
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.		
√	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.		
√	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.		
√	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).		
√	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

There is a need to update the logical framework 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 steering committee recommended the extension of the project period without additional costs. The review of the logical framework will be done during the formulation of the request to extend the project period.

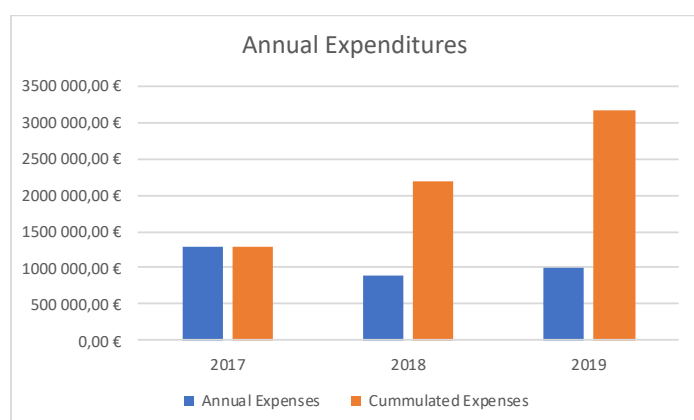
10.3 Summary of More Results

Logical framework's results or indicators modified in last 12 months?	No but it is anticipated during the MTR 2019 especially for result 2 in 2020-Q3
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 2017-Q2 2019-10 – review MTR recommendations next backstopping mission is planned in 2020 Q3

10.4 “Budget versus current December 2019 report

Euros	Total Budget	TOT previous Years		TOT	TOTAL EXEPENDITURES	Balance	Disbursement Rate end 2019
		2017	2018	2019			
Total général	8 000 000,00	1 293 890,74	889 272,11	986 544,14	3 169 706,99	4 830 293,01	40%
A - Activities	4 260 000,00	346 980,32	367 794,40	435 295,42	1 150 070,14	3 109 929,86	27%
TAN1403111_A01	312 000,00	113 705,34	15 866,95	13 625,17	143 197,46	168 802,54	46%
TAN1403111_A02	2 030 000,00	26 850,34	26 538,06	178 853,54	232 241,94	1 797 758,06	11%
TAN1403111_A03	585 000,00	86 329,56	147 969,12	68 721,55	303 020,23	281 979,77	52%
TAN1403111_A04	852 000,00	41 380,52	162 540,62	153 790,60	357 711,74	494 288,26	42%
TAN1403111_A05	481 000,00	78 714,56	14 879,65	20 304,56	113 898,77	367 101,23	24%
B - NTAs/ITAs	2 054 400,00	519 732,39	360 340,83	339 344,59	1 219 417,81	834 982,19	59%
X - Reserve	93 050,00	-	-	-	-	93 050,00	0%
Z - General Means	1 592 550,00	427 178,03	161 136,88	211 904,13	800 219,04	792 330,96	50%

In 2018, the disbursement rate was 27%. In 2019, the total expenditure gowned to 3.169.708 Euros and a rate of 40%.



From 2017 to 2019, there is a clear increase of the expenditure. The project is at his maturity stage.

10.5 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

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 survey progress

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

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