



Formalize or Not?

The Case of the Mkombozi Water Users' Association in Babati District, Tanzania



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This paper discusses the possible transformation of the paddy/rice food system, with a focus on the semi-formal Mkombozi Water Users' Association (WUA). The current situation, challenges and opportunities are set in the context of production potential, market demand, power relations, external support, internal strife and the role and power of diverse formal and informal actors. The case shows that farmer empowerment requires more than just supporting farmers or a farmers' organisation; it requires power analysis and anticipation of changing (informal and formal) actor configurations.

The context – Mkombozi Irrigation Scheme and Water Users' Association

The Mkombozi Irrigation Scheme in Rural Babati District was established in 2003. Babati district is part of Manyara district Tanzania. Using water from the Kou and Rugina rivers, the scheme currently has 900 acres that are highly suitable for paddy cultivation.



Figure 1: Map of Tanzania, highlighting Manyara Region. Source: Manyara Region - [Wikipedia](#).

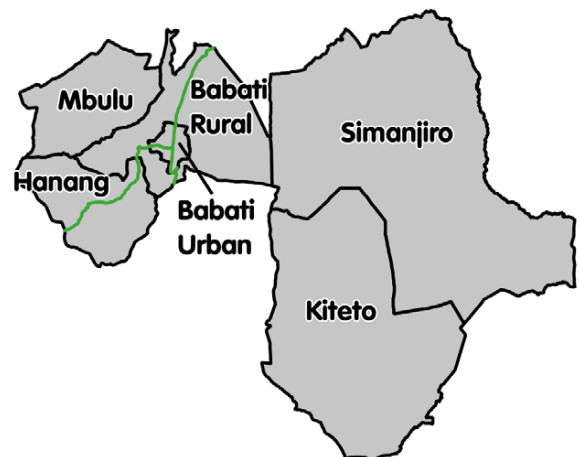


Figure 2: Districts of Manyara Region, including Babati Rural and Urban. Source: Manyara Region - [Wikipedia](#).

The Mkombozi Water Users' Association (WUA) provides irrigation services to paddy farmers in the Mkombozi Irrigation Scheme. The WUA office is in Gichamedia village (Magugu ward), which is some 10 kilometres from the Arusha-Babati main road. The nearby urban area is Babati town, which is the regional capital of Manyara region. There are few all-weather roads; most roads are not easily passable during and after heavy rains. Most farmers in the scheme grow special local paddy varieties (*Super Mkombozi* and *Super Magugu*), which are known for their very good taste and smell. These varieties are in high demand, both in local markets, national urban centres and export markets. During two production seasons, smallholder farmers, owning plots of one to ten acres, cultivate paddy for household consumption and for sale. Compared to other crops and activities, paddy production is their most important income earner.

Key actors in the food system: the formal and informal

There are many actors involved in the paddy/rice food system in and around Babati district, both formal and informal, as shown in Figure 3 below.

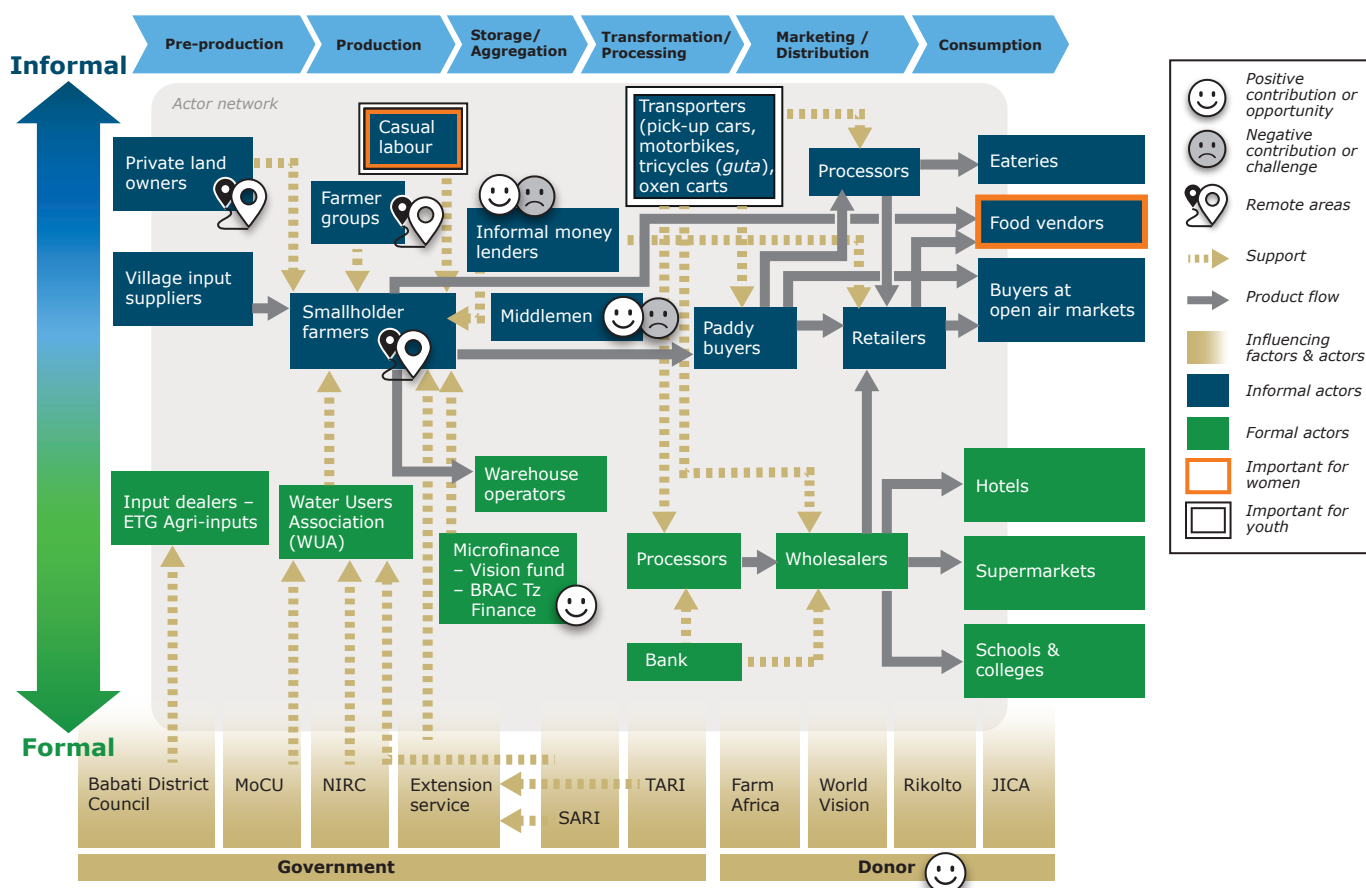


Figure 3: Actors network – Paddy/rice in Babati District Council, Tanzania.

Input supply. The farmers get farm inputs from several retail agro-input shops, especially in the Magugu sub-urban area. One of the nearby large input suppliers is Mamba Rafiki Kilimo. The reliable access to inputs is from the government-led supply of subsidized farm inputs, which are distributed by companies such as ETG Agri Inputs Ltd. So far, the WUA has not managed to organize effective supply of agro-inputs to its members. That's why farmers take personal initiative to get the inputs they need from informal village input suppliers.

Financial services. There are some registered microfinance institutions (MFIs), including Vision Fund, BRAC Tanzania Finance Ltd and others. The farmers prefer these MFIs because, compared to commercial banks, the process of getting loans is much easier. MFI's do not ask for collateral security, production or business plans, nor do they make an assessment of payment capacity. They do however have higher interest rates (30–40% per year) and some MFI's require weekly repayments. Fines are charged in case of late loan repayment.

Informal money lenders also play a significant role in enabling farmers to access credits. Compared to MFIs, they charge higher interest rates. Loan repayment is generally after paddy harvesting. Most of the informal money lenders are also middlemen. They supervise harvesting and processing to determine the production output. They can support farmers to find buyers or they buy the paddy/rice themselves. For both situations, the loan (principal and interest) is paid after sales. In case of delayed repayment, fines are charged to the farmers, according to informal agreements made. Farmers mostly go to MFI's and try to avoid informal money lenders.



Figure 4: Field preparation with hand-held machine.



Figure 5: Weeding.

Casual labour production services. In addition to family labour, casual labour is very important throughout the production cycle; they are hired for land preparation, planting, weeding, plant protection, harvesting, threshing, winnowing, drying and bagging of paddy.



Figure 6: Casual labourers transport to work in paddy fields.



Figure 7: Labourers transplanting young plants.

Transport. Local transporters play a key role in transporting paddy from the farms to the households, to milling machines and trading centres. Motorbikes, 1MT tricycles with fixed trailers (*guta*), small vans and oxen/donkey carts are the most common means of transport.



Figure 8: Tricycle (*guta*) for transportation.



Figure 9: Oxen carts.

Marketing. In Gichameda village, farmers sell their paddy to middlemen, larger individual paddy buyers or food vendors. The absence of warehouse capacity in the village has made paddy storage a challenging job, especially for farmers with a significant production. In addition to clearing outstanding debts, the lack of storage capacity forces quite some farmers to sell paddy immediately after harvesting. This deprives them from the possibility to fetch higher prices when markets stabilize. Some of the important individual paddy buyers include Makala, Hussein, Suda, Jumanne and others, who are actively buying in and around the Mkombozi Irrigation scheme. These off-takers sell the paddy to processors within the District or nearby areas, especially Arusha region. Some off-takers have their own processing machines at Magugu sub-urban centre. The larger buyers are not providing credits to farmers. There are few farmers who opt to send the paddy to private warehouses in Magugu. Aggregators from outside the village play less important roles, because farmers sell rice directly to middlemen, wholesale and retail buyers.

Research and training. Tanzania Agricultural Research Institute (TARI) has been working with the WUA to undertake agricultural research and to support the production and distribution of the local variety of paddy seeds (*Super Mkombozi* and *Super Magugu*). Selian Tanzania Agricultural Research Institute (SARI) has also been supporting the farmers through agricultural training and conducting soil pH assessment. The Moshi Co-operative University (MoCU) provides trainings to pre-cooperative farmer groups to evolve towards co-operatives and to undertake collective action for improved member benefits. The MoCU also supports existing co-operative societies to improve their governance, management and performance through training and advisory services. The MoCU has collaborated with Rikolto to support the Mkombozi WUA (see below for more details).

Irrigation and extension services. The National Irrigation Commission (NIRC) works as a regulator and supervisor on issues related to the management of the Mkombozi irrigation scheme and the tasks and operations of the Mkombozi WUA. Some Government Extension Officers (from Babati District Council) provide advisory services at the Ward level.

NGO's and project support. For years, different NGO's have played key roles in supporting the farmers through the WUA. These include Japan International Cooperation Agency (JICA), Rikolto East Africa (formerly VECO), Farm Africa and World Vision. The support ranged from funding the construction and repair of irrigation infrastructure, capacity building, establishing demo plots, to linking farmers and the WUA to input suppliers, financial institutions and buyers. Rikolto implemented a joint Graduate Internship Programme (GIP) in collaboration with the Moshi Co-operative University (MoCU). Between January 2019 and December 2021, interns were attached to the Mkombozi WUA. Capacity-building activities envisaged strengthening the management and operational capacity of the leaders and staff.

Current food system outcomes

Positive outcomes

Various socio-economic drivers sustain paddy farming in the villages in Babati district: available farmland, available labour, market outlets, input supply, supporting institutions and, last but not least, high consumer demand and preference for the produced rice varieties. Paddy farming means assured employment and income for farmers, which enable them to take care of family welfare, to get social services and improve housing conditions. Paddy farming also offers employment to casual labourers who are working with farmers in preparing farms, planting, harvesting, threshing, winnowing, drying and bagging. Supporting public services and projects enabled farmers to improve their agricultural practices in paddy farming and other crops and life skills. The natural environment, irrigation infrastructure and water use have been relatively well managed. Food security has been improved in terms of availability, accessibility and affordability. The rice varieties that are produced in Babati have a good reputation and reach many consumer markets.



Figure 10: Irrigation canals in Mkombozi irrigation scheme.

Challenges and opportunities: much can be improved

These outcomes notwithstanding, there are also quite some challenges and related opportunities.

- Yields can be significantly improved if farmers would have access to the right inputs at the right time at an affordable price. Collective procurement of quality inputs and further improvement of agricultural practices are important opportunities.
- Farmers are mainly paddy producers; they are selling their paddy without any post-harvest addition. Processing of farmers' paddy into quality rice is an important opportunity.
- Farmers are price takers: they sell immediately after harvest. The price they get is much lower than what traders fetch later in the year, as the market position of the rice varieties produced is very positive.
- There is hardly any local aggregation because of a lack of storage capacity and the farmers' need to repay debts and face household expenditures.
- The Mkombozi WUA has not managed to provide sufficient services to its members, e.g., access to inputs and credit, processing of paddy into rice and collective marketing and bargaining.
- The preference for the Mkombozi rice varieties is insufficiently harnessed as a business opportunity for market penetration and expansion. There is high potential for selling rice in various regions across the country, including the nearby regions of Arusha, Singida, Dodoma and Kilimanjaro. Further market opportunities to explore include targeting large customers such as the World Food Programme (WFP) and the East Africa Community market.
- The customers' preference for the *Super Magugu* and *Super Mkombozi* varieties, have led to cases of cheating local traders, who mix the rice from the Mkombozi scheme with rice from other regions to get good prices. Bagging and branding are important economic opportunities.

The existing paddy/rice food system is very important for farmers and the wider community. The next sections discuss the efforts of external actors to support farmers in harnessing the opportunities that clearly exist, with emphasis on the organisation of farmers to produce rice instead of paddy and for taking collective action for improved access to inputs and finance, for value creation, aggregation and collective marketing.

Supporting farmers to produce rice instead of paddy only: ups and downs

Hardware support. For years, farmers have been selling their paddy without any post-harvest value addition. They just harvested and bagged the paddy and then sold to retail and wholesale buyers, mostly coming from outside the village. Some 10 years ago, they could have started processing paddy into rice, as in 2013 Mkombozi WUA managed to have a building and get a processing machine with donor support. However, the WUA failed to mobilize and handle member contributions to finish the building and installation works, because of poor leadership, limited group cohesion, members' distrust in the leadership, and lack of competent staff.

It was only as of recent (2021–2022), under the guidance of the MoCU-Rikolto Graduate Intern Programme (GIP) that the WUA finished the construction of the building and installed the paddy processing machine.

The WUA, through its paddy milling machine can be an active player in the local market. However, the installed machine does not yet have a grading part, and the WUA did not yet start collective marketing.



Figure 11: WUA office.



Figure 12: Building for paddy processing.

Farmers still sell individually. Farmers keep their paddy at home and individually sell it to middlemen, retail and wholesale buyers, mostly from Magugu sub-urban centre, Babati Town and Arusha city. The achievement in installing the processing machine gave the farmers the opportunity to produce rice and to develop collective marketing. This is however not yet a reality. At best, farmers sell rice (instead of paddy) individually. They process the paddy at the WUA processing unit, where the rice is sold directly to the mentioned off-takers.

Large-scale aggregation and collective marketing is thus not done. This is partly due to limited storage space, but mainly due to the fact that farmers have to sell soon after harvesting paddy, to pay for outstanding debts (inputs, labour). Farmers also fear crop decay if not properly stored at their homes. The challenge with limited aggregation is that farmers cannot speculate for a higher price, as the traders are doing now.



Figure 13: Paddy processing machine operator.

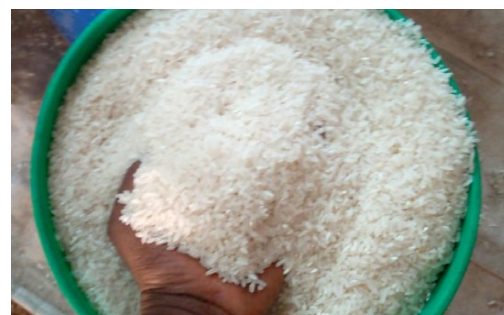


Figure 14: Ungraded rice produced at paddy processing unit of Mkombozi WUA.

Facilitating collective action and formalization: ups and downs

External sensitization and training. The situation that members still sell rice individually motivated Moshi Co-operative University and Rikolto to engage with the WUA and to start the process of transforming the semi-formal association into a more formal Irrigators and Marketing Co-operative Society (IMCOS). Under the Graduate Internship Programme (GIP), they trained farmers on the co-operative business model, its benefits and registration requirements. It was explained how the co-operative model can strengthen the bargaining power of the farmers and can be used for collective procurement of inputs and for collective marketing of paddy and rice. Sorting and grading, packaging and branding of the rice could further strengthen the farmers' market position. The Co-operative Officer and Ward Extension Officer of Babati District Council were also involved in the mobilization and sensitization process. It was put forward that improved cooperative services could convince more farmers to become a member, including youth and women. Although these efforts did not lead to the expected transformation of the WUA into an IMCOS, the GIP induced farmers to mobilize funds to complete the existing building and fix the machine in 2022.

Farmers' hesitation and motivation to transform into a co-operative. So far, the WUA leaders and some farmers have been hesitant to transform the WUA into a co-operative. The interest to remain semi-formal under the WUA seems to have so far dominated. There are signs though that paddy farmers are gradually realizing the need to have a co-operative after the failure of the WUA to support input supply, access to credit and collective marketing. It is not to be excluded that WUA leaders are also middlemen or informal traders, and would not benefit from farmer empowerment and cooperative development.



Figure 15: Planting paddy.

Hesitations

"Many of us are less aware of what will happen if we become a co-operative. We have seen how other co-operatives failed in the Manyara region and nearby areas."

"We will be asked to contribute money, which can be misused by leaders."

"The WUA leaders are not interested to transform into a co-operative as they don't want to be regulated, audited and being frequently monitored and inspected by the co-operative officers."

Motivation

Some farmers have the feeling that it is possible to do better and wish to see the IMCOS established. As one farmer argued:

“

I know co-operatives are important to us. We have seen how a Gichamedia co-operative helped sugarcane farmers to access inputs and markets. We need the same for us, so we can sell rice collectively and overcome the power of middlemen and get more income through good rice prices...”

NIRC opposition. When implementing the GIP, MoCU and Rikolto concentrated on forming one co-operative for irrigation and marketing functions. This faced opposition from the Engineer of the National Irrigation Commission, who wanted to keep the WUA as it is. A separate co-operative would have to handle the business functions (access to inputs and credit, processing, marketing and other services). The GIP perceived one IMCOS as more efficient: members would only pay the entry fee once, buy shares and make contributions to one organisation, elect one Board and use the same management, office and processing unit. The NIRC saw irrigation services and commercial services as different functions. The GIP organized a study visit of Mkombozi WUA to the UWAMALE Irrigators and Marketing Co-operative Ltd in Meru District Council (Arusha region) to learn about the integrated model, which did not lead to the desired change (formation of IMCOS).

Rikolto and MoCU concentrated on one organisation, which would provide irrigation and marketing services. The NIRC was opposed to this. What were the reasons of NIRC? There could be arguments for having two organisations: one for water use and irrigation services (to be paid for and an obligation for all farmers using the irrigation scheme) and one for cooperative services to members (for earning money and voluntary membership of farmers).

The mentioned hesitations within the WUA and the competing views and interests of the GIP partners and NIRC personnel left the farmers in the same position as they were before. Up till now, the farmers are not organized for collective procurement, processing and marketing.



Figure 16: Large buyers use large vehicles for paddy transportation.

Conclusions and lessons learned

Functional integrated system with formal and informal players

The stakeholder network of the paddy/rice system in Babati district is composed of many actors. The most important formal actors include input suppliers, formal MFIs, the Babati District council, extension officers, NIRC scheme engineer, research and training institutions (TARI, SARI, MoCU), several NGO's and donors, and the WUA itself. If they do not offer nearby services, banks, processors, wholesalers and aggregators are not directly important for farmers and the WUA. The important informal actors include village input suppliers, casual labourers, middlemen, brokers, travelling traders and different types of transporters (small vans, oxen and donkey carts, tri-cycles and motorbikes). These informal actors are connectors; among others making links to formal input dealers, and connecting the production areas to where the consumer demand is. The current system functions quite well, farmers have a more or less secured livelihood, the irrigation scheme produces important quantities of paddy and rice of high quality, which reaches different consumer markets. Services (training and extension, micro-finance, transport and others) reach the farmers.

Many options for improvement

From a farmer empowerment and livelihood improvement perspective, it would be good if farmers would: (a) improve access to inputs of reliable quality at an affordable price; b) transform paddy into rice; (c) aggregate and store paddy and rice to benefit more from higher prices; (d) collectively sell their rice; (e) grade, bag and brand their rice and (f) transport and distribute the rice products to different markets.

So far, solutions came from the outside

It is remarkable that different NGOs and donors tried to empower farmers by working with an existing (semi-formal) farmers' organization i.e., the Mkombozi WUA. At first the support was in kind (building and machine), which led to a so-called 'white elephant' (infrastructure and equipment that is not used). The reason was that insufficient attention was given to farmer ownership and own contributions. This was only repaired some 10 year later by another support programme (GIP), when the graduate intern convinced the WUA members to finalize the construction and installation works. For both support modalities, the 'solution' was brought from the outside, with limited real farmer ownership. For years, the WUA did and could not provide relevant services to the farmer members. The organisation leadership was not sufficiently trusted. Legally, the WUA is not registered to undertake business operations, hence cannot undertake collective marketing and other business operations.

Stay open for alternative solutions

The GIP gave due attention to the organizational aspects of farmer empowerment, but was rather focused on an integrated model, combining irrigation and commercial services. Farmers and leaders were not convinced. The integrated model also got resistance from the NIRC engineer, who suggested to keep the organisation of water users (WUA) separate from commercial activities of the same farmers (Coop). For GIP this was like an obstruction. It is unlikely that NIRC thought the same about the transformation of the WUA into an IMCOS. Openness to different options and discussing these with farmers and other stakeholders is important to avoid a stalemate situation, with supporting parties (GIP and NIRC) opposing each other, leaving the farmers behind in confusion.

The theory of change is not necessarily the reality of change

The GIP strongly believed that once restructured and transformed into an IMCOS, the organized farmers would be in a position to produce quality rice that can be branded, labelled and sold to various market outlets. Considering the internal hesitations, the distrust in leadership, personal interests, and the power, roles and views of other actors, this is quite questionable. Furthermore, there was a history of weak governance, which negatively affected the effectiveness of the WUA to move towards processing activities despite the opportunities to do so (building and processing machine acquired with donor support). And even when farmers, after 10 years, could process their paddy at the WUA paddy milling machine, they continued to sell rice individually. This implies that somehow the current informal system is working for the farmers (collection of paddy, connection to market, some embedded services, such as provision of bags and advance payments).

Ask yourself if farmers want formalization

Doubts about formalization are one of the reasons why the transformation from WUA to IMCOS did not happen. This was phrased in two frames: (a) formalization comes with a lot of extra requirements and with uncertainties and (2) leaders do not want to be regulated by authorities, including internal inspection and external audits. This is an important lesson from this case study. Fear of being regulated and other uncertainties under the co-operative model need to be thoroughly discussed with farmers, showing advantages and disadvantages. Although staying informal may ease the management of the WUA, it would not enable farmers to engage in commercial activities and the sustainability of the WUA would remain questionable. In this context, it is important to be open to the different options for the organisation of farmers: remaining the current WUA, the transformation of the WUA into the IMCOS (integrated model) or having two organisations, one for water use management and one for cooperative business.

Discuss options for food system change

To deepen the farmers' reflection about the integrated cooperative business model, it would have been good to discuss what would happen if the IMCOS would develop certain services. What would be the activities to undertake, with whom to collaborate, with whom to compete? What will be the changes compared to the current situation? Who will win and who will lose? This would help to anticipate on what is likely to happen, not only in terms of actions and resources required for IMCOS, but also the likely changes in power and roles of different actors in the system. This could be done for the following subjects:

- Provision of input supply services to members
- Facilitating access to finance
- Paddy aggregation and storage
- Rice procession and rice storage
- Collective marketing.

Anticipate on different actor configurations

If the organizational changes would indeed happen, these would have consequences for other actors in the food system. For instance:

- Paddy aggregation, storage, processing and collective rice marketing would strongly reduce the role of middlemen, current small buyers, informal creditors and local transporters (such as small vans, tri-cycles, ox and donkey carts).
- If the IMCOS would succeed in improving farmers' access to affordable credit, then the role of informal creditors would be significantly reduced.
- If the village would still not have warehouse capacity, then the collaboration with aggregators in nearby areas such as Magugu would have to be improved, if indeed the IMCOS would want to collect more paddy, store it, and then process and sell it based on market demand.
- If the IMCOS would develop their new services. the roles of several formal actors such as NGOs (Rikolto and others), MoCU, research institutions (TARI and SARI), input suppliers, formal MFIs and banks, NIRC, Tanzania Co-operative Development Commission (TCDC) would become more important for accompanying the development of these new services.
- If farmers would get more services from their business organisation (IMCOS), then the role of some informal actors would likely be reduced e.g. small transporters, informal money lenders and casual labourers.

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