



RESEARCH ARTICLE

What leads to the success of sustainable investment in rural settings through Village Savings and Loans Associations? The experience of the CARE-WWF Alliance

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This study explores the changes brought by collective sustainable investment (CSI) model through Village Saving Loan Associations (VSLAs) in Tanzania. The CSI model aimed to minimize the impact of environmental degradation and climate change following the longstanding overexploitation of the Great Ruaha River catchment. The study employed qualitative designed and was guided by Lewin's three stage model. Twelve focus group discussions (FGDs) with women, men, and youth farmers from 2 selected villages in Mufindi and Iringa Districts were conducted. In addition, key informant interviews (KIIs) were conducted with project implementers, village leaders, conservation leaders, community based trainers and Local Government Authorities (LGAs). The collected data were analysed by using latent content analysis. The findings show that adherence to the VSLA constitution by members, the evaluation of environmental impact of the project by VSLA members and the encouragement of non-farm activities investment by members are major reasons for the success of VSLAs in Tanzania. Furthermore, the study concludes that the CSI model can help in achieving sustainable investment whereby farmers are assessing the impact of investment on environmental and biodiversity before issuing of the funds.

Keywords sustainable investment • Village Savings and Loan Associations • Lewin's three stage model

Key messages

- Public sources of climate finance are insufficient, with offsetting a means for emitters to provide redress.
- Small-scale farmers have insufficient skills to minimize the impact of climate change caused by their bad agronomic practices.
- The ability of the CSI model to help small-scale farmers to mitigate the effect of climate change was debatable.
- The CSI model can deliver a change to farmers and environment, but for this to occur some important factors have to be implemented such as group sharing and adhering to group constitutions.

To cite this article: Nandonde, F., Kahamba, J., Lalika, M., Skinner, A. Simfukwe, M., Mahajan, S., Mkusa, L., Kipondya, W., Mangi, H., Kijoji, A., Alan, T., Lubawa, G. and Makfura, E. (2026) What leads to the success of sustainable investment in rural settings through Village Savings and Loans Associations? The experience of the CARE-WWF Alliance, *Global Social Challenges Journal*, Early View, DOI: 10.1332/27523349Y2025D000000064

Introduction

Recently, there has been a trend of supporting rural communities to have access to finance and farm inputs in developing economies. The practice is noble, but if not monitored it may lead to environmental impact. For example, in Tanzania, some consultancy reports revealed that as a result of access to finance, there is overuse of pesticides and poor agronomic practices in regions such as Mbeya, Iringa and Njombe (Lahr et al, 2016; Liu et al, 2023). If these practices persist there is a possibility of destroying natural resources and water pollution in the near future. There is a dearth

of knowledge on how small-scale farmers engage in sustainable investment through their savings. Accordingly, the current study aimed to fill this knowledge gap through the community sustainable investment model developed by the CARE-WWF Alliance in Iringa and Njombe, Tanzania.

Globally, studies on sustainable investments are dominated by corporate literature (Marti et al, 2024), and less is known about the practices of smallholder farmers (SFs) on sustainable investment. Further, previous studies on conservation and development failed to include the participation of community members in decision making (see Znajda, 2014). During farming activities, SFs engage in practices – such as cutting trees, cultivating near water sources, and pesticides overuse – that harm the environment. The effects of these unsustainable practices by SFs are well documented elsewhere. Furthermore, literature on sustainable farming shows that SFs are engaged in sustainable practices by being driven by buyers through private brands such as Fairtrade, in which some farmers in the Global South participate (Pirotte et al, 2006; Nandonde, 2012; Sutton, 2014; Makangila and Ahmad, 2023). Sustainable investments driven by community-led initiatives such as Village Savings and Loans Associations (VSLAs) remain under-studied. The current study intends to understand the changes brought by sustainable farming practices of farmers managed by their own initiatives such as VSLAs. Accordingly, it is important to understand how SFs engage in sustainable farming through VSLAs during the climate change impact times.

Literature in Africa shows that a lot of research has been conducted on the impact of VSLAs in assisting to bridge the gap in improving financial inclusions for SFs and rural population in general. For example, the impact of VSLAs in access to finance (Flynn and Sumberg, 2018; Maganga, 2021), health improvement (Brannen and Shehan-Connor, 2016; Mutebi et al, 2017; Munthali et al, 2022), the adoption of agricultural technology and increased farm productivity (Beamen et al, 2014; Cameron and Ananga, 2015; Dagunga et al, 2020), children's access to education (Cameron and Ananga, 2015; Brannen and Shehan-Connor, 2016) and an increase of income (Sibomana and Shukla, 2016; Karlan et al, 2017). Others include, increased food consumption (Beamen et al, 2014; Mwansakilwa et al, 2017), women's empowerment (Karlan et al, 2017) and poverty reduction (Maganga, 2021). In practice, VSLAs led to more income to farmers. Literature suggests that the higher the income farmers earn the higher the use of pesticides and exploitation of natural resources leading to environmental degradation (Lahr et al, 2016; Liu et al, 2023). Thus, it is crucial to understand how VSLAs will transform farmers; in turn influencing them to join sustainable farming. In spite of these previous efforts, little is known on the impact of practices of VSLAs members on sustainable investment in farming activities in Africa.

Based on their nature, VSLAs can be regarded as alternative interventions of development approach whose outcomes amount to meeting basic needs, self-reliance, sustainable and endogenous development, and hence development from below (Pieterse, 1996; 1998). Thus, VSLAs can be used not only in the short term or directly linked to income generation but also for long-term outcomes such as behavioural changes of business-minded people (Flynn and Sumberg, 2018) and thus, the adoption of environmental conservation practices.

The impact of climate change on agricultural production in developing countries has been well documented, indicating the extent to which rural poor, particularly SFs, are highly affected by climate variation and climate-driven extremes such as extended

drought and floods (see Maddison et al, 2007; Cline, 2008; Habib-ur-Rahman et al, 2022). On the other hand, sub-Saharan countries are characterized by the largest number of small-scale farms where the use of local knowledge and traditional skills of agronomy still dominates, thus necessitating the implementation of climate-smart practices (IPCC, 2014; FANRPAN, 2016). However, as the region struggles to deal with the impact of climate change, the biggest challenge has been leveraging finance for climate change responses, for example smart agriculture (FAO, 2009). Small-scale farmers, particularly women, have limited access to finance, information and decision-making power, which are necessary in making investments to improve farming practices or to restore/sustain other ecosystems/services, such as watersheds, which in turn are all critical to their livelihoods (CARE and WWF, 2022).

This reality calls for a need to promote sustainable investment among small-scale farmers through VSLA-granted funds for the protection of natural resources and their livelihoods. In that regard, it is very important to understand what makes sustainable investment possible in rural settings in Africa through the VSLAs model as piloted by the CARE-WWF Alliance in Tanzania. How can VSLAs implement sustainable investment in developing economies such as Tanzania?

The community context and relevancy of microfinancing as an alternative approach

The community context

The CARE-WWF Alliance has been working in Tanzania since 2015. In its central Tanzanian project in the Ndembera sub-catchment of the Great Ruaha River, the Alliance seeks to promote not only livelihood diversification and economic opportunity but also ecosystem service provision and biodiversity conservation. From 2021 to 2023, the Alliance launched a Collective Sustainable Investment (CSI) project in 21 villages of Iringa and Mufindi districts. The project has four objectives: (1) to extend informal savings groups and collective access to financial services to 5,000 farming families (22,500 individuals), especially women; (2) to increase sustainable investment and production to improve small-scale farmer income by 60 per cent and food security by 20 per cent; (3) to improve ecosystem resilience and functions in production landscapes in Ndembera sub-catchment of the Great Ruaha River; and (4) to strengthen public and private partnerships to improve small-scale producer access to extension, inputs, markets, financial services and benefits from ecosystem services.

Small-scale farmers, particularly women, often have limited access to the finance, information and decision-making power necessary to make investments to improve the land/soil that they farm or to restore/sustain other ecosystems/services critical to their livelihoods, such as watersheds (Perez et al, 2015; Touch et al, 2024). The CARE-WWF Alliance, based on learning, proposed to pilot, research and adapt an innovative model for addressing this challenge. This savings and loan innovation, on the other hand, seeks to accelerate the access to finance of small-scale farmers, particularly women, in ways that promote ecologically sustainable investments that sustain or improve ecosystems critical to their livelihoods and conservation.

The foundational VSLA model upon which this innovation iterates serves women with limited income, including small-scale farmers. CARE has tested and refined it with target users across Africa and globally. By mainstreaming ecological sustainability

into the existing community-based credit approach, the Alliance's innovation seeks to safeguard the environment from the harm that results from common agricultural investments, such as converting native forest into a new agricultural field using slash-and-burn techniques or purchasing chemical pesticides that pollute water sources and land (Pamuk et al, 2018).

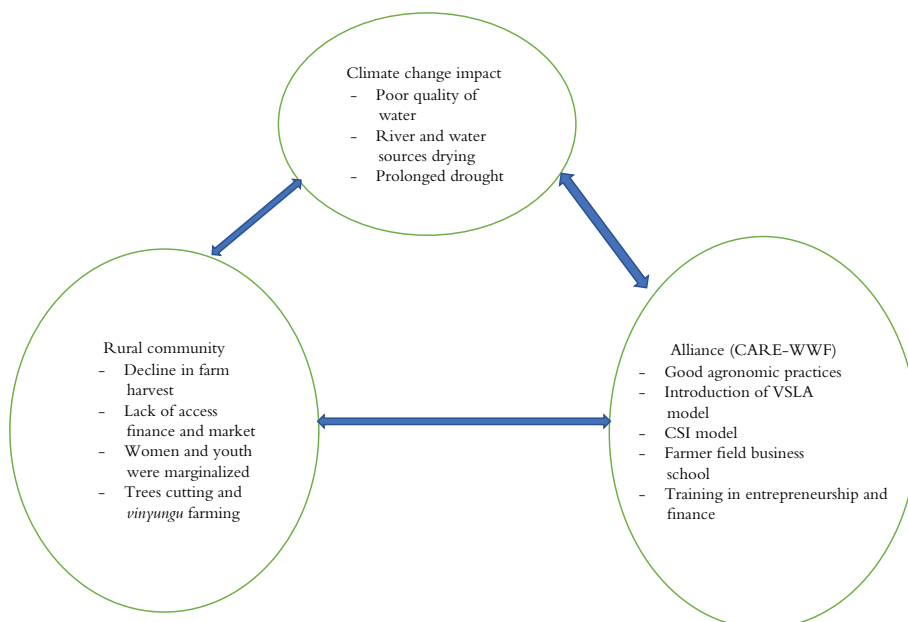
Microfinancing as alternative model

The Alliance introduced the CSI model in the second year of an integrated conservation and development project in Utosi village in Iringa district. The first year of the project included various activities, such as training, before the introduction of CSI, mainly related to awareness-raising on the importance of environment and ecosystem services (forest and water sources) for their livelihoods; village land-use planning, including integrated land and water management training; pest management planning, to avoid pesticides, which are dangerous to the environment and their health in agriculture; sustainable agriculture (conservation and climate-smart agriculture) practices; and collective access to inputs through last-mile input delivery (linking VSLAs with agro-dealers).

The CARE-WWF Alliance CSI model seeks to address challenges of small-scale farmers including limited access to finance, information and decision making, which are necessary to make investments to improve their farming land or to restore or sustain other ecosystems and services, such as watersheds, all of which are critical to their livelihoods (Pamuk et al, 2018). To address these challenges the Alliance introduced the CSI model as conceptualized in Figure 1.

Figure 1 shows that the model is expected to improve access to finance among marginalized groups and engages the community in a restoration programme by

Figure 1: Collective sustainable investment model



promoting the use of a VSLAs approach in 21 villages in Tanzania. The model suggests that the rural community is characterized by low income (Aikaeli, 2010), low access to finance, harvest decline and that youth and women are marginalized. Based on that, a good number of SFs engage in tree cutting, cultivating near the river banks and water sources in the study area (WWF, 2023). Thus, the savings and loan innovation seeks to accelerate access to finance among small-scale farmers, particularly women, and to community-based conservation groups, to be able to finance their economic activities in ways that promote ecologically sustainable investments that sustain or improve ecosystems, which are critical to their livelihoods and conservation. Figure 1 shows the holistic approach of the CSI model in addressing the challenges that communities face as a result of climate change.

The VSLA is a self-managed group of 15–30 individual members from a community who meet regularly to save their money in a safe space, access small loans, and obtain emergency insurance through what is called a social fund. The activities of the group run in cycles of one year, after which, the accumulated savings and loans profit are distributed back to members. VSLAs increase in the feeling of social and economic independence, confidence and maintenance of the existing levels of economic investment.

However, the traditional VSLAs do not enable effective action for ecosystem sustainability and may even enable investments that are harmful to the environment (for example, opening new agricultural fields in primary forests or the purchase of environmentally harmful chemical or fertilizers). Thus, the CSI model integrates two key innovations – collective investment and sustainable investment.

In this regard, the Alliance considers interventions such as raising awareness about sustainable practices and creating incentives and mechanisms for CSIs at the household, farm (through farmer field and business schools and agricultural marketing cooperative societies) and collective or landscape level (through community-based conservation organizations) as shown in Figure 1. Therefore, the approach seeks to promote financial inclusion for small-scale farmers in ways that also motivate, enable and reward investments that sustain and improve ecosystem services critical to their long-term livelihoods and well-being.

On the other hand, the introduction of collective investments seeks to enable small-scale farmers to leverage the social benefits of collective action and access the economic benefits of economies of scale. The Alliance defines a collective investment as ‘an investment combining efforts and money of three or more people to achieve a shared business objective’ (Skinner et al, 2024: 2).

Following the CSI protocols, only the matured VSLAs were to be trained on collective and sustainable investment as they had already completed one cycle, built trust among members, and could plan to invest together. By November 2023, in 114 VSLAs with a total number of 2,057 members, 68 per cent of the women were trained on collective and sustainable investment and among these, 40 groups with 728 members (62 per cent women) had already started to invest together with investments of a total value of TZS132,273,000 were deposited at NMB bank by members of VSLAs.

With this background, it is important to understand how VSLAs, as an alternative development intervention, can lead to sustainable investment in rural communities. The study contributes to rural financing and sustainable investment studies.

Literature review

Previous studies in Africa show that VSLAs have great role to play on changing the life of urban and rural communities in the continent. For example, a study by [Flynn and Sumberg \(2018\)](#) on VSLAs as game changers for youths in Africa, including Zambia, Tanzania, Uganda and Ghana, noted an increase in access to finance. Another study by [Munthali et al \(2022\)](#) on the impact of COVID-19 on VSLAs in Malawi indicated that VSLAs played a great role in food access during the pandemic in the country. We understand the contributions of previous studies in Africa on the impact of VSLAs but we noticed that some of these studies were not guided by theories or framework/models thus, limiting the robustness of knowledge.

The current study used Lewin's three-stage change model to understand what led to the success of CSI as an innovation model by the CARE-WWF Alliance in the pilot project in Iringa and Mufindi districts in Tanzania. The model, which originated from child psychology and has been extensively used in human resource and strategic change management, holds that, for a change to occur, external and internal forces should be accepted by the community ([Lewin, 1947](#)). The model can be applied in the agriculture sector to help understand how changes can be introduced to the sector to help farmers improve their farming practices. For example, during the climate change time where farmers are reluctant to use new farming methods like climate-smart agriculture, the model suggests that approaches like training and study tours can be used to change farmers' old practices to new approaches such as the use of water tolerant seeds. When the changes have managed to penetrate, the model suggests that the practices can be integrated into the community through policy to enforce standards and rewards. That means, if farmers have accepted to use the water-resistant seeds, policy can be developed to limit the sale of other seeds products such as indigenous seeds and rewarding farmers with market access and subsidized improved seeds and fertilizers for using them.

We argue that dynamics, caused by the impacts of climate change and interventions of the CARE-WWF Alliance in Mufindi and Iringa districts have influenced the manner in which farmers operate. These interventions included the introduction of cover crops, tree planting, entrepreneurship, community investment and gender training. However, to understand how farmers transformed their practices after the interventions, there is a need to investigate the current situation that members of the VSLAs are undergoing on dimensions forming the three stages of the change model.

The three stages of the change model assume that there are three main forces that influence farmers' (firms') operation status namely, *driving*, *restraining* and *equilibrium* forces ([Hussain et al, 2018](#)). *Restraining* forces are aspects that go against any new ideas, which are introduced with an interest of restoring a situation after the introduction of some new practices. Simply put, these are the forces that limit new approaches aimed to change current farming practices in an area of VSLA operations. In the past, members of the VSLA used to experience a decline of farm harvests and poor water quality due to poor agronomic practices. In this respect, the CARE-WWF Alliance initiated several reforms including the introduction of new crops such as potatoes, soya beans and common beans in the project area. Further, the pilot project encouraged members of the group to invest together and engage in the protection of nature and biodiversity and avoid bottom-valley

cultivations (*vinyungu*). These new agronomic practices aimed to improve living standards of members, increase water sources and river-water levels, and improve biodiversity and the income of the community.

The critical question, however, is how VSLA can implement this integration of promoting community living standards and manage to protect the environment (Guruwo et al, 2023) at the same time, while the literature indicates that the higher the income, the higher the likelihood of environmental destruction by those earning the income (Lahr et al, 2016). Further, any survival plan has to be sustainable, which implies having minimal or no effect on other actors in the value chain. However, climate change has had negative effects on all actors in the value chain, from the upstream to downstream; now how would members of the VSLA implement their activities so as not to cause negative effects to other actors in the value chain?

The model suggests that for any change to occur, there must be a *driving force*. The impacts of climate change that are affecting farmers, including drying of water rivers and water sources (CARE, 2019), translates into farmers facing a decline of farm produce in the study area (Mufindi and Iringa districts): these are the 'driving forces' causing poor harvests, leading to poverty and discrimination of women at the household level (CARE, 2019). This means farmers have to design new means of survival and maintenance of their environment in their villages. Some of these means entail tree planting, establishing tree nurseries and reducing the use of pesticides. We argue that, in the past, many farmers in Tanzania had resources and knowledge of enabling them to attain this goal.

Another dimension is called *equilibrium*: this means that, if the current practices are not changed, VSLA operations will be the same. Until there are forces that destabilize current positions the motion will not begin (Burnes, 2020). We argue that, in the past, climate change impact had led to a decline in farm harvests and of women and youth empowerment and had changed the way people spend their income. Initially, however, farmers were reluctant to accept changes of agricultural practices introduced in Tanzania (Sarr et al, 2024). Accordingly, it is very important to understand how the current context has changed the way farmers improve their living standards and how they adopt farming practices to reduce the effects of climate change and conserve the environment.

Literature on the impact of VSLAs in Africa focused on the increase of financial access to youth (Flynn and Sumberg, 2018) and the impact of VSLAs on access to agricultural technology in Ghana (Dagunga et al, 2020). We argue that previous efforts by researchers helped to understand the impact of the VSLA in different dimensions such as access to technology, enablers of youths' access to finance, sustainable farming, and small and medium enterprises (SMEs) growth in Africa (Pamuk et al, 2021). However, there is a need to understand the role of VSLA in promoting sustainable agriculture and environmental protection. This is because, as stated earlier, as farmers' income increases so are the chances for them to engage in investment and in the use of some of the technologies that may cause biodiversity loss and environmental degradation. Based on this background, it is very important to understand how VSLAs balance this trade-off among members through sustainable investment in income-generating activities in their areas.

There are conflicting findings on the impact of VSLAs on the community in developing economies. For example, a study by Banerjee et al (2015) revealed that VSLAs may lead to an increase in income but may not lead to growth or

transformation; this is because what members receive is just enough to support operations such as farming, but not investment. According to Flynn and Sumberg (2018), in Tanzania, the VSLA has an impact on an increase of income of the youth; but income does not lead to investment. Overall, studies show that an increase in income is a result of family participation in VSLAs, whereby households manage to access farm inputs and healthcare.

While an increase in income helps farmers to improve their livelihoods, there are some investments which, if not controlled, may lead to more damage to the ecology and natural resources. For example, a number of reports indicate that there is overuse of pesticides and herbicides in developing economies, including Tanzania (Lahr et al, 2016), as farmers gain more access to them. As Sheahan et al (2017) observe, an increase of income leads to overuse of pesticides. The study indicates further that, in Tanzania, families that use pesticides have been observed to visit doctors more frequently than families that do not use pesticides in farming.

In this respect, the current study is guided by the Lewin's three-stage model to explore the influence of VSLA in promoting sustainable investment in Africa with the case of Tanzania's agriculture sector. Lewin's model as one the change models is useful in agriculture because it can help organizations working with farmers to understand the forces within the community that limit farmers' acceptance of changes. This will help change makers such as NGOs or government agencies to design supports, rewards and policies that will accelerate change acceptance and limit farmers' ability to slip back into old practices. We indicated earlier that the CARE-WWF Alliance aimed to reduce the use of agro-economic practices that lead to land degradation and low production of agricultural produce by the introduction of new practices. Based on that, the model helps to explain the potential changes occurred after interventions.

Methodology and contextualization

Research design

The study employed a qualitative method to explore the success of the CSI model piloted in two villages, Utosi and Ibumila, in Mufindi and Iringa districts respectively. Overall, the Alliance's pilot project was implemented in 21 villages in the study area. A cross-section research design was used to collect data from the two mentioned villages where focus group discussions (FGDs), key informant interviews (KIIs) and observations were used as data collection instruments.

The Alliance team also planned and facilitated a participatory learning events for the community-based trainers (CBTs) and key district officials engaged in rolling out the model. Thus, the researchers observed discussions and conducted interviews with CBTs from Ukeremi, Utosi and Ibumila villages. Data were collected in September 2023 at the district and village offices, villages' central meeting area, and at a central event venue in Mufindi.

Research protocol and sampling procedure

A semi-structured interview was used as a data collection tool that guides the interviewers to collect data on general perceptions of the innovative model, as well as relevant contextual trends that could affect the model processes and outcomes.

A purposeful sampling technique was employed to select participants in FGDs from a subset of 21 villages and 114 VSLAs who participated in the CSI model. As [Creswell \(2013\)](#) and [Plummer \(1983\)](#) suggest, qualitative research needs to have participants who are marginal, ordinary or great. In total, participants for 12 FGDs were selected from four VSLAs from the two villages (two conservation VSLAs and two agriculture VSLAs, one VSLA per category with high performance and one with lower performance). Participants were selected from Ibumila and Utosi villages in Iringa and Mufindi districts respectively. One of the two villages was quite reluctant to accept the project; both villages had records of marginalizing women and youths.

Gender and age representation were taken into consideration to ensure key impact groups, which were targeted by the project, were included in the study, including women and men as well as youth. In general, issues of whether to participate in certain economic activities in African families are often determined by perceptions and decision making of the head of the household ([Anderson et al, 2017](#)). In Iringa region, due to societal norms, men are perceived as more powerful partners and most women have limited voice in ownership of, control of, and access to household resources ([Nyamhanga and Frumence, 2014](#); [Haule, 2021](#)). Therefore, this study isolated elder men from project impact groups – women and youth – so that each had their own dedicated space to share their unique perceptions of change. In other words, women and men attended separate FGDs and only FGDs composed of female and male youths to capture the unique experiences of men, women and youth related to issues of group trust, equity and model outcomes.

Data access and data collection

The team paid a courtesy call to the District Executive Director's (DED) office to explain the aim of the research study. Thus, the data collection process started with the introduction of the research team to each district's administration by Alliance officers.

After getting permission from the DED's office, the researchers conducted KIIs with the District Agriculture Officer, the District Environmental Officer and the District Development Officers in both districts. Additional KIIs were conducted with village leaders (in their offices), village conservation leaders (in their villages) and CBTs (at the learning event) – to get their insights and experiences regarding the implementation and outcomes (both intended and unintended) of the model, including challenges encountered during the implementation.

FGDs with VSLA members themselves comprised a bulk of the data collection sources focusing on the perceptions of participants of the CSI model, in the evaluation of its processes and outcomes. Twelve FGDs were conducted to small-scale farmers (six with agriculturally oriented groups and six FGDs with conservation-oriented groups) to collect collective perspectives on the existing conservation (natural resource management/use) and development (agriculture, marketing, investment, gender) practices; social, economic and ecological outcomes of the model, including any unintended consequences; and its effect on decision making. Other perspectives include motivation of small-scale farmers and conservation groups, including how the model affects the integration of conservation and development among small-scale farmers; thinking and practice of conservation groups; and the challenges faced by these groups in implementing sustainable and collective investments, including any trade-offs between conservation and development aspects of the model.

Before starting the FGDs, researchers shared with VSLA members the importance of their participation in the process and asked for their permission to record the conversations using a tape recorder and taking photographs. After obtaining their verbal consent, researchers and participants introduced themselves, and thereafter, FGDs commenced in the Kiswahili language.

On average, each FGD had 11 participants and lasted for 1 hour and 30 minutes. For each FGD, at least two researchers participated, with one running the discussion and the other observing and taking notes. Recorded audios were transcribed from Kiswahili, translated into English and printed for data analysis.

Data analysis technique

To understand how CSI innovative model has changed the perception of VSLA members on farming practices in the visited area, the current study used the constructivism paradigm. The paradigm holds that people construct knowledge based on their experience (schema) from the information they receive ([Atwater, 1996](#)). The CARE-WWF Alliance introduced a new approach in 21 villages in Mufindi and Iringa districts in Tanzania aiming to change how farmers protect the environment during the climate change using VSLAs and adopt good agronomic practices to increase household income.

In that regard, the pilot project introduced several changes, including new agronomic practices (the control of overuse of herbicides and disposal of empty bottles, farmer field business school); environmental protection (new techniques of protecting water sources, market access, technologies and new crops (soy beans, common beans and potatoes)); and collective investment in and training on entrepreneurship. All these interventions aimed to change farmers' experiences and practices and empower them with skills of protecting the soil and withstanding climate change impact. Therefore, to understand how VSLA members perceive these changes that aimed to affect their lives, the constructivism paradigm was deemed as appropriate in the current study.

As [Patton \(1987\)](#) argues, the key factor for selecting and making decisions about the appropriate unit of analysis is the decision of which unit one wants to consider. Therefore, it is important to understand and identify contextual factors surrounding the unit of analysis ([Grünbaum, 2007](#)). Thus, the goal of the study is understanding how the VSLA conservation model has managed to change smallholder farming practices in the visited area. As we argued earlier, some of the practices in the study areas such as cultivation near water sources and marginalization of women and the youth are common practices in the area. The current project aimed to address these with a view to improving environments and protecting biodiversity ([CARE, 2018](#)). Further, women and the youth who suffer from marginalization in the community do not have a strong economy and do not own any means of production, such as land. This means that deciding on the unity of analysis is very important to understanding how women, men and youth will interact in these dynamics. Accordingly, the unit of analysis in this study is community engagement in solving environmental degradation and biodiversity loss through the sustainable investment model.

Data were analysed using latent content analysis: this method allows the researcher to analyse data not just based on what has been said but goes further, to understanding the meaning of the words used ([Bengtsson, 2016](#); [Nandonde, 2016](#)). That means it is very important to use the analytical technique to understand the changes brought by VSLA model at the family level, and the relationship between women and men

Table 1: Example of latent content analysis

Code	Category	Themes
• ... once they have money things changes • ... women can start not to respect you • My husband allowed me to join VSLA • Education from CARE helped us • Training on group investment • Equity has helped us ... • We bought 15 bee hives ...	Group investment	Resource mobilization and gender
• Our constitution requires us to invest together • We added collective investment in our rules • One has to work for group investment	Constitution adherence	Adhering to the group constitution by members
• ... we reject if money will used in making of charcoal • ... we review the loan before dishing out the fund • It's ... er ... difficult but we have to do it • We have that in our constitution • In some cases we can advice as a group in how money will be used	Loan screening	
• It's a job that has not profit ... • ... we are doing it for the next generation • ... that is the only source of income • You know, he will not accept	Protecting the environment	Environmental protection dimension
• ... we have been threatened • We receive many threats • ... that is the only source of income • ... father, why can't you stay away from this activities • we were threatened to be witched • You are just young man ...	Conflicts with the community	
• This influenced us to establish a day care at Ukeremi • ... as a group we have food catering services • Some of the women have salon • Because of weekly payment we have to work outside the farm as well • ... we have to engage in a number of activities, such as a casual labour	Income generation activities	Non-farm activities by members

after the economic empowerment intervention. Table 1 provides the example of how data were analysed from code sentence, via category to themes.

Findings

Through this study, we have identified different mechanisms or links that intervene in the activities and achievements or outcomes (both intended and unintended) of the WWF-CARE Alliance pilot programme on the CSI model, namely: collective investment, adherence of the VSLA constitution by members, the evaluation of the environmental impact of the project by VSLA members, and the encouragement of non-farm activities investment by members.

Resource mobilization and gender dynamics

Interviews with members of both conservation and agriculture VSLAs revealed that the group constitution stipulates that members should engage in collective investment.

This aimed to stimulate resource mobilization among marginalized groups such as women and youth. Further, the project trained members on the importance of crafting group constitution that will guide their operations.

Therefore, the interest in engaging in collective investment is associated with the interest in adhering to the constitution. One of the FGD participants in Utoosi village responded, 'in our group when we started, we started with conservation activities alone but as days went on, we added another thing in our constitution, that we will invest together' (Participant, FGD, Utoosi Village).

It was learned that, even though the level of investment for interviewed groups was small, members had already planned to start a collective investment as part of learning and adhering to the constitution. For example, members in the women group in Utoosi village in Mufindi district were ready to engage in the farming of improved common beans in a farm size of a quarter an acre despite the level of investment being low. A similar situation manifested in Ibumila village in Iringa, where a youth conservation group was engaged in beekeeping starting with 30 beehives. This suggests that the project has managed to develop community dynamics that have shaped investment behaviour and adherence to the group constitution.

Adhering to the group constitution by members

Interviews with members of both conservation and agriculture VSLAs revealed that the group constitution stipulates that members should engage in collective investment. The interest in engaging in collective investment is associated with an interest in adhering to the constitution. In FGD in Utoosi village one of the participants remarked: 'in our group when we started, we started with conservation activities alone but as days went on, we added another thing in our constitution, that we will invest together' (male FGD participant, Utoosi Village, Iringa DC, 2023).

In practice, group investment was not that big; however, the investment has managed to strengthen the bond among members of the VSLA. This increased their joint efforts as members in engaging in various activities that promote the conservation of environment and biodiversity. Further, group investment was used as a means of introducing innovations such as soy beans, drought tolerant seeds and new farming practices in the village. This implies that farmers gained experience of good crop husbandry through engaging in group farming or collective investment.

Environmental dimensions emphasized by VSLA members

Interviews revealed that the model has empowered VSLA members to evaluate the likely environmental impact of a proposed investment before disbursing of loans to borrowers. As part of investment decision making, VSLA members collectively evaluate the type of investment an individual member is proposing or a group.

FGD participants reported that if the proposed investment is not found to be harmful to the environment or contribute to climate change, then the loan would be granted. In fact, VSLA members report rejecting some of the proposed projects, which were intended to be invested in agricultural inputs and activities (such as brick making near water sources) as they were considered to be dangerous to the ecosystem in their village.

Findings from interviews revealed that communities in the project area have changed but the progress will be gradual. During the FGD, one of the women in Ibumila VSLA group said: 'In our group we ask borrowers to tell us how are they going to use the money ... we ask every borrower! If the investment is considered to be detrimental to the environment, members may reject the proposal and disapprove the loan'.

Encouragement of non-farm activities investment by members

Based on the interviews with VSLA group members, the model seems, through training, to have helped farmers to notice more investment opportunities surrounding them in their areas.

For instance, during KIIs a female CBT from Ukeremi village in Mufindi said that some women VSLA members reported to have been experiencing challenges in continuing taking care of their children while engaging in non-farm, economic activities to raise money to pay for their weekly shares. As a result, Ukeremi VSLA identified the opportunity and decided to collectively establish daycare/preschool. Parents can pay 15,000 per month for school fees. This collective, socially oriented business has already employed two teachers and has enrolled 40 pupils for the 2023 academic season. The CBT explained:

We women who are in VSLA groups are required to go with a weekly contribution at the VSLA for buying a share. To do this, we have to engage in a number of activities, such as a casual labour, and some of us have children, which makes it difficult for us to participate fully in other economic activities that will enable us to have income and pay a weekly amount at VSLA. This influenced us to establish a day care at Ukeremi.

Other non-farm activities in which VSLA members are engaged include food catering, hairdressing and farm input business. In practice, these activities enable members of VSLA to generate income and be able to pay their weekly membership share which varies from TZS5,000 to TZS20,000.

Discussion

The study findings suggest that the CSI model integrates restoration and protection of environment, promotion of youth and women economic empowerment, collective investment and good agronomic practices, which can be implemented through VSLA. In general, the study indicates that VSLAs can be used to promote sustainable investment among farmers and minimize the impact of climate change in developing economies. We argued earlier that the higher the access to finance to farmers, the higher the risk of environment destruction. The main findings show that some of the important reasons influencing the success of the CSI model include adherence to the constitution, encouragement of non-farm activities investment, and members' participation in the evaluation of the investment

Furthermore, the study indicates that VSLA pilot study project is beneficial to women and youth empowerment. This is in contrast to findings in a study by [Brennan and Shehan-Connor \(2016\)](#) on a VSLA in Zanzibar, which has shown that VSLAs have increased youths' and women's confidence on making investment

decisions and participation in collective investment such as value addition and farming.

In addition, the study has managed to add to the body of knowledge on the possibility of using VSLA to promote sustainable investment in the rural village in developing economies through the use of CSI model. This suggests that VSLAs can be used to control the use of pesticides, and even bad agronomic practices, which are harmful to humans and biodiversity. In general, the use of farmers' groups to monitor the use of pesticides and other practices in agriculture is not a new phenomenon. For example, farmers who are engaged in private labels such as Fairtrade coffee or organic products have been monitoring their practices among themselves for their interest in protecting and serving their market. But the current approach has given that power to the farmers instead of the market-driven initiatives.

Furthermore, the study has shown a number of introduced changes, such as new crops (soy beans and Irish potatoes) and new farming practices. The changes, which have been introduced by pilot project, were once facing challenges of acceptability at the household level due to the experiences farmers have gone through in the area and to cultural issues. Women engaged in farming activities such as growing soy bean and improved varieties of common beans were not getting enough support from their spouses. This suggests that Lewin's three-stage model of change is one of the appropriate tools that can be used to understand the changes occurring in developing economies, focusing on the CSI model and environmental protection.

Also, the study revealed that women and youth are engaged in value addition and the establishment of agri-food processing in rural areas; this includes soy bean processing for Ibumila village, which was established by women in the VSLA. This finding concurs with the finding in a study by [Karlan et al \(2017\)](#) which suggests that VSLAs have an impact on women's empowerment. However, the current SMEs policy does not provide incentives to these rural enterprises in the country such as a grace period before paying for a business licence and other certificates. In addition, there is the emergence of rural entrepreneurs in non-farm activities that seem to be important during the climate change period; this implies that it is important to develop the means that can support VSLA members or groups that have been engaged in a new economic activity. In this regard, the study is proposing a mentoring and coaching programme for these women rural entrepreneurs.

Conclusion

In spite of the foregoing contributions on the importance of VSLA members, as suggested by the current study, the CSI model in developing economies has some limitations. Because the changes brought about by the CSI model through VSLAs in the community involve changing behaviour and practices, future studies should embrace psychological and behaviour changes theories such as the theory of planned behaviour and social exchange theory. The studies in developing countries in Africa have been dominated by theories from developed countries. We argue that future studies should focus on the generation of appropriate theories and frameworks that fit the African context. The current study employed a qualitative method to explore the perception of VSLA members on the CSI piloted by CARE-WWF Alliance in Tanzania; future studies should use quantitative or mixed methods to unearth some of the issues that seem to be debated, such as the role of VSLA for

women and youth empowerment and economic transformation in a rural setting. Further, the impact of CSI on the protection and stimulating environment protection among SFs could use a longitudinal study.

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Funding

The authors received no financial support for the research, authorship and/or publication of this article.

Research ethics statement

Ethical approval was not required for the present study because the research does not involve human or non-human participants.

Conflict of interest

The authors declare that there is no conflict of interest.

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