

An Insight of Village Community Banks as the Tool of Forest Resource Conservation: A Case of Selected Villages Adjacent Pugu and Kazimzumbwi Forest Reserve

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Abstract:

Village Community Bank (VICOBA) is established with the intention of eradicating extreme poverty and enhancing economic and social development. However, it is clear that poor societies in rural areas depend more on forest resources as a source of energy which results in the depletion of resources. Having well-coordinated and operating VICOBA in the community; improves their livelihood and shifts from depending on natural resources like forest. This study assessed the contribution of VICOBA to forest resource conservation. The study used a cross-sectional design whereby a multistage sampling technique and Probability Proportional to Size (PPS) were used to get a sample of 230 respondents. Data were collected using questionnaires and analyzed using SPSS. Findings show that over 75.7% of VICOBA members agree that economic activities as the results of the VICOBA program aided in reducing much dependence on forest products like wood and charcoal consumption and affords alternative sources of energy like electricity, gas, and solar energy while only 24.3% of respondents disagree. On the other hand, 76.5% of respondents agreed that the VICOBA program helped them in increasing individual income. Finally, this study recommends that alternative sources of income-generating activities should be promoted especially in the communities adjacent to forest resources in order to reduce dependence on forest resources for economic purposes.

Keywords: Village Community Banks (VICOBA), Forest resource, Conservation

Introduction:

Worldwide various studies have provided sufficient evidence on how microfinance institutions like village community banks that offer microcredit act as catalysts for economic development, social inclusion, and poverty alleviation for the poor (Reed, 2011, Tasos, et al., 2020 & Magali, 2021). Village Community Bank (VICOBA) provides microcredit which is mostly needed in society with limited resources, especially for poor families and underprivileged groups like women and the disabled (Yunus, 2011). Like other

nations, Tanzania had put more emphasis on poverty reduction together with resource sustainability; this resulted in the formulation of Village Community Banks (VICOBA) as the major tool of community poverty reduction (SEDT, 2008). VICOBA plays a vital role in society's livelihood improvements and in empowering individual persons to achieve economically independent status (Mshote, 2016). In this case government tried to encourage community members and different stakeholders including

commercial banks and business management experts to share knowledge together with the community on how to operate the Village Community Banks (URT, 2017). The most common impacts of community bank groups' operation in developing countries including Tanzania are capacity building among community members on business operations skills, income generation among community members as well as poverty reduction (Khavul, 2010). Moreover, VICOBA provides investment capital to the communities that are trapped in the poverty cycle, in order to end poverty (Arifin, et al., 2020).

According to the Tanzania Census conducted in 2022 it shows that the population of Tanzania is highly increasing to more than 62 million people at a 4.3% annual growth rate (NBS, 2022). With the increase in the population, automatically results in a scramble and depletion of natural resources like forest resources, especially in the rural areas where they depend so much on charcoal and firewood as sources of energy (Blomley and Idd, 2009). Tanzania is largely covered by forest resources and approximately 55% of Tanzania's mainland is covered by forest resources including different forest types like miombo woodland across the central and southern part, acacia woodland in the northern part, and other types are mangrove and coastal forest (MNRT, 2015). But with the trend of increasing human population in Tanzania, without proper economic initiatives may results to both poverty as well as over exploitation and deforestation of forest resources. This necessitate the needs of integrated solutions including poverty alleviation and alternative sources of income among community members to reduce human dependence on forest resources (MNRT, 2015).

Despite the fact that VICOBA plays functions of poverty eradication and alternative income generation among community members to afford life expenses rather than engaging in illegal activities such as illegal forest harvesting (SEDIT, 2008) its contribution to resource conservation is not well known. The study conducted by Ngalemwa (2013) on the contribution of village

community banks in poverty alleviation shows inadequate information on VICOBA as an alternative source of income which helps in resource sustainability. Also study by Wild *et al.* (2008) on the importance of community microfinance institutions in formulating capital among community members to establish small businesses and sustainable projects that reduce illegal exploitation of natural resources shows less concern about the VICOBA program towards resource sustainability. A study by Struhsaker *et al.* (2005) reported that the human population increasing results in the overconsumption of forest resources which needs sufficient knowledge integrating poverty alleviation and alternative sources of income among community members to reduce dependence on forest resources consumption (MNRT, 2015). For the fact that it is not known contribution of VICOBA programs as an alternative source of income that aids in forest resources conservation and to what extent the program aids people in gaining income so that they can establish economic activities friendly to the forest resources. This study assessed economic activities generated by VICOBA programs and their suitability in forest conservation. Specifically, the study determined the impacts of economic activities engaged by VICOBA members in relation to forest conservation so as to add knowledge about the contribution of Village Community Banks in forest resource conservation.

Research Methodology:

The study was conducted in five villages adjacent to Kazimzumbwi and Pugu forest reserves found in the coast region and some parts of the Pugu forest reserve found in the Dar es Salaam region, Tanzania. The study was carried at selected communities adjacent to these forest reserves due to its potentiality of having large number of endemic species of both animals and plants which need to be conserved (Malugu, 2007). The target population of this study was VICOBA members living in the communities adjacent to Kazimzumbwi and Pugu forest reserves, According Kothari (2004) population is the entire

group of people, things, or phenomena of interest that a researcher wishes to study. Cross-sectional research design was used because data was collected once and this design is used for descriptive statistics as well as determining the relationship between variables (Bailey, 1994; Babbie, 1999 and Kothari, 2004). Three (3) wards were selected randomly which were adjacent to both forest reserves and from selected wards, 5 villages were selected randomly which were Kisarawe Sokoni, Kazimzumbwi, Pugu station, Pugu Kajiungeni and Bomani. In the selected villages, a number of VICOBA groups selected for the study was done by Probability Proportional technique which resulted to 540 total of VICOBA members and sample of population involved in the study was obtained after derive the following formula which results to 230 respondents. Lushakuzi *et al.*, (2017) reports that Yamane formula considered to save time and costs.

$$n = \frac{\sum N}{1 + \sum N (e)^2}$$

Where n= Sample size

$\sum N$ = Total population size

e =level of precision which is 0.05 (5%), and this level of precision is considered to be an appropriate one due to the fact that its stable level of precision and accuracy in survey study to give an appropriate sample size. Data were collected by using a questionnaire and the analysis of quantitative data was done with the help of Statistical Package for Social Science (SPSS) and Microsoft Excel.

Results and Discussion:

Respondents' social demographic and economic characteristics

Table 1, shows the respondent's distribution according to their social demographic and economic characteristics. White *et al.* (2008) state that social demographic and economic characteristics determine whether individuals in a particular study are true representatives of the targeted population and these social demographic

and economic characteristics were measured by the following variables

Age of respondents:

According to Ngalemwa, (2016), the Age structure of the study population determines dynamics in lifestyle and the ability of population to engage in different economic activities. Findings from the study (Table 1) shows that majority of respondents aged 31-50 years about 55.7% which is more than half of the total respondents, and about 33.9% of respondents aged 18-30 years which is over a quarter of respondents and 9.1% aged between 51-60 and only 1.3% aged above 60, this implies that VICOBA members were energy and aged enough to respond questions. According to Nanai (1993), respondents aged above 18 are capable of responding to questions, Furthermore, these findings imply that the VICOBA program involves active people in production activities.

Gender of Respondents:

Findings in Table 2, show that 82.6% of respondents were women and men about 17.4%. These results are supported by studies of Kihongo (2005) and Lucas & Akarro (2006) which show that the majority of women are motivated and participate in community finance groups compared to men. These results have implications that VICOBA can be helpful to mostly women who are actors of charcoal utilization to be economically independent and be able to afford alternative sources of energy rather than charcoal.

Marital status of respondents:

Findings in Table 1, show that, 50.4% of respondents were married, 23.9% were single, 13.5% were divorced, 8.7% were widows/widowers and only 3.5% were separated. These results are the same as Ngeremwa (2013) found that the majority of VICOBA members are married with extended family also Maselle, (2009) noted that marriage is the factor associated with poverty and determines the welfare of the society and affordability of life. However, Kihongo (2005) found that the VICOBA program aids in poverty alleviation as well as improving the welfare of

people. The results of the study show a large number of VICOBA members over 50.4% were married. Marriage is the key factor that determines the welfare of people, participation in VIKOBA, and preservation of forest resources (Maselle, 2009 & Mrindoko, 2022).

Educational level of respondents:

Also, findings in Table 1, show that respondents with primary education were about 37.8 while secondary education was about 25.2%, adult education about 18.7%, college about 7.8%, universities about 5.2%, advanced level about 3%, and vocational training about 2.2%. According to Telema *et al.*, (2005), Education determines people's opportunities to access information. The findings of this study found that a large number of VICOBA members were primarily educated over 37.8% of the respondents and only 5.2% had a university education. This had the implication that

extension education based on conservation knowledge should be provided to the community including integrating VICOBA in conservation so as to adopt conservation innovation.

Respondents place of birth:

Awareness of seeking opportunities for economic activities and cultural aspects in conserving natural resources can be influenced by place of birth (White *et al.*, 2008). Study findings show that 57.8% were born in the villages adjacent to forest reserves and 42.2% were born outside of villages adjacent to forest reserves but they migrated to those villages. This implies that people are highly migrating to the areas near forest resources and these VICOBA programs aid them in capital formulation to engage themselves in alternative economic activities that are friendly to forest resources.

Table 1: Respondent’s social demographic and economic characteristics (n=230)

Characteristics	Category	Frequency	Percent
Respondent’s age	18-30	78	33.9
	31-50	128	55.7
	51-60	21	9.1
	Above 60	3	1.3
Respondent’s gender	Men	40	17.4
	Women	190	82.6
Respondent’s marital status	Single	55	23.9
	Married	116	50.4
	Divorced	31	13.5
	Widow/Widower	20	8.7
	Separated	8	3.5
Respondent’s education level	Basic primary	87	37.8
	Form 1- 4	58	25.2
	Advance level	7	3.0
	College	18	7.8
	Vocational training	5	2.2
	Adult education	43	18.7
	Universities	12	5.2
	Respondent’s place of birth	Inside village	133
Outside village		97	42.2

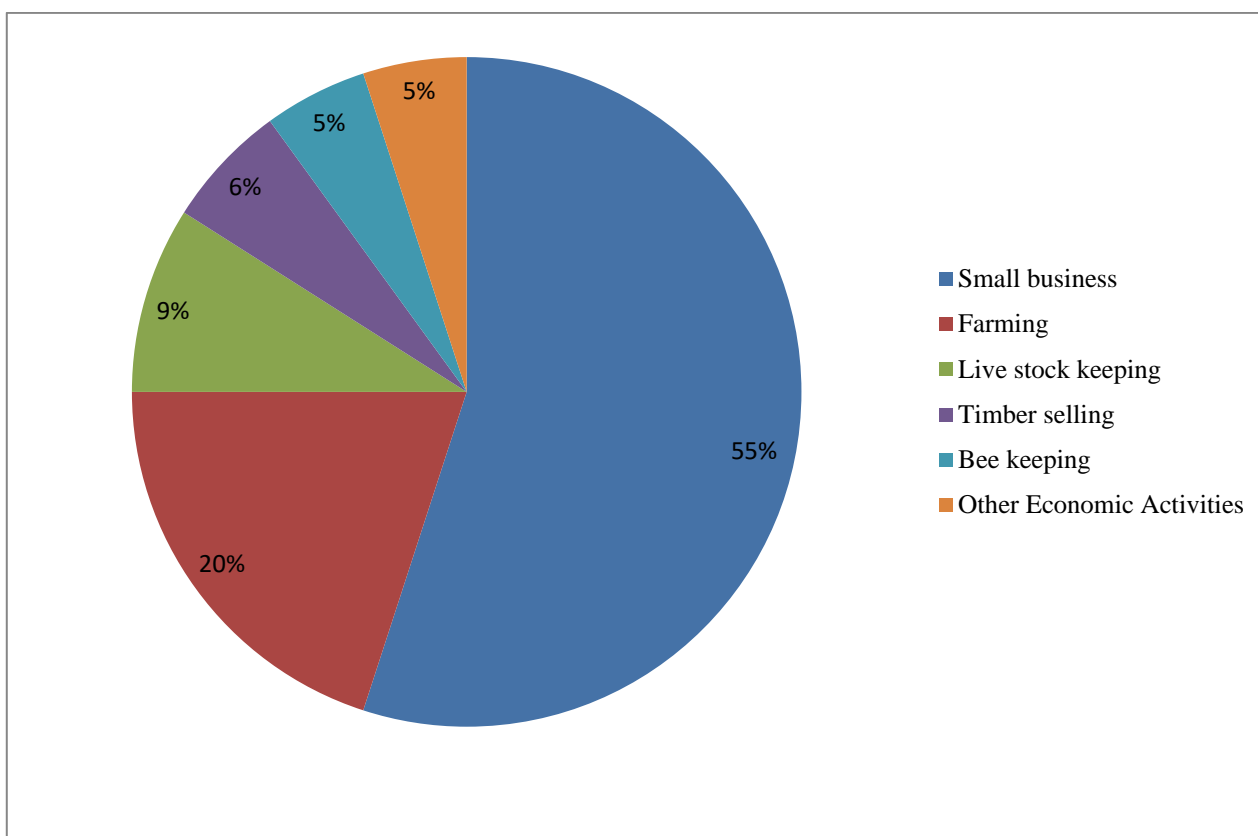
Source: Researcher’s own data (2024).

Major economic activities engaged by the VICOBA program

Study findings represent that the VICOBA program motivates people to engage in different economic activities. Figure 1, shows that 55% of VICOBA members are engaged in small business, 20% are engaged in farming, 9% are engaged in livestock keeping, 6% are engaged in timber selling, 5% are engaged in beekeeping, and 5% are engaged in other economic activities. These results

imply that the VICOBA program facilitates people in different activities that are mostly environmentally friendly. Over 55% of respondents are engaged in small business rather 20% and 9% who engaged in farming and livestock keeping respectively which attract much destruction of forest resources. This means VICOBA members are less dealing in economic activities which can be the source of forest destruction.

Figure 1: Economic activities engaged by VICOBA members (n=230)



Source: Researcher's own data (2024).

Economic activities formulated by VICOBA in relation to forest conservation

According to Scherr (2000) reducing poverty can be major factor of conserving natural resources from illegal exploitation including forest resources. The findings in Table 2, shows that majority of VICOBA members agree that this program help them to engage in different economic activities and results in economic stabilization which reduces illegal activities over forest resources. The results of the study show that over 75.7% of VICOBA members agree that economic activities as the

results from the VICOBA program aid in reducing much dependence on forest products like wood consumption while 24.3% of respondents disagree. This implies that VICOBA helps in forest conservation by 75.7%. Findings show that this program helps in reducing dependence on forest resources by providing loans over 47%, business skills over 28%, formulating sustainable projects over 15%, and controlling illegal activities over 11%. This means that a large number of VICOBA members receive loans and business skills as alternative sources of income rather than exploring forest resources.

Table 2: Response of respondents in economic activities formulated by VICOBA linked to forest conservation (n = 230)

Characteristics	Category	Frequency	Percent
Economic activities formulated by VICOBA aid in forest conservation	Yes	174	75.7
	No	56	23.3
How VICOBA help its members In relation to forest conservation	Loan provision	109	47
	Business skills provision	61	28
	Formulating sustainable projects	35	15
	Controlling illegal activities	25	11

Source: Researcher’s own data (2024).

Economic activities formulated by VICOBA in relation to society's wellbeing

Society's well-being is regarded as a key factor that determines the influence of people on natural resources dependence Scherr, (2000). According to Nayak (2014), poor society causes much degradation of both the environment and natural resources due to much dependence on it. There are many variables that determine society well-being including level of income, affordability of basic

needs (food, shelter, and clothes), and ability to adopt innovation toward a positive attitude. The findings of the study show that the VICOBA program aids its members in income improvement by 76.5% and in affording basic needs by 88.3% also due to economic activities results from VICOBA, 84.3% were able to afford alternative sources of energy including electricity, gas and solar energy. This implies that VICOBA helps in improving society's wellbeing and reduces dependence on forest resources like wood fuels.

Table 3: Response of respondents in economic activities formulated by VICOBA in relation to society wellbeing (n = 230)

Characteristics	Category	Frequency	Percent
VICOBA functions in income status	Improving income	176	76.5
	Lower income	54	23.5
VICOBA aid in affordability of basic needs (food, shelter and clothes)	Yes	203	88.3
	No	27	11.7
VICOBA aid in affordability of alternative source of energy(electricity, gas and solar energy)	Yes	194	84.3
	No	36	15.7

Source; Researcher’s own data (2024).

Factors influencing VICOBA member awareness of forest conservation

Figure 2, shows some factors that were perceived to influence VICOBA members' awareness of conserving forest resources. The findings of the

study show that (44%) of respondents were motivated in conservation due to conservation education provided to them. These results resemble to those of Kruse and Card (2004), which states that the adoption of conservation education among

people could help to convert people's mind attitudes toward positive conservation altitude. About 30% of respondents were aware of conservation due to the presence of conservation agencies (WWF, TFS, and TAWIRI) that perform some conservation activities with community collaboration. But, 9% of respondents indicate that

conservation awareness is influenced by access to alternative sources of income and energy. Also, participatory forestry conservation shown to influence member's awareness by 17%, this means by involving them directly in conservation activities it could be easy to adopt those conservation activities.

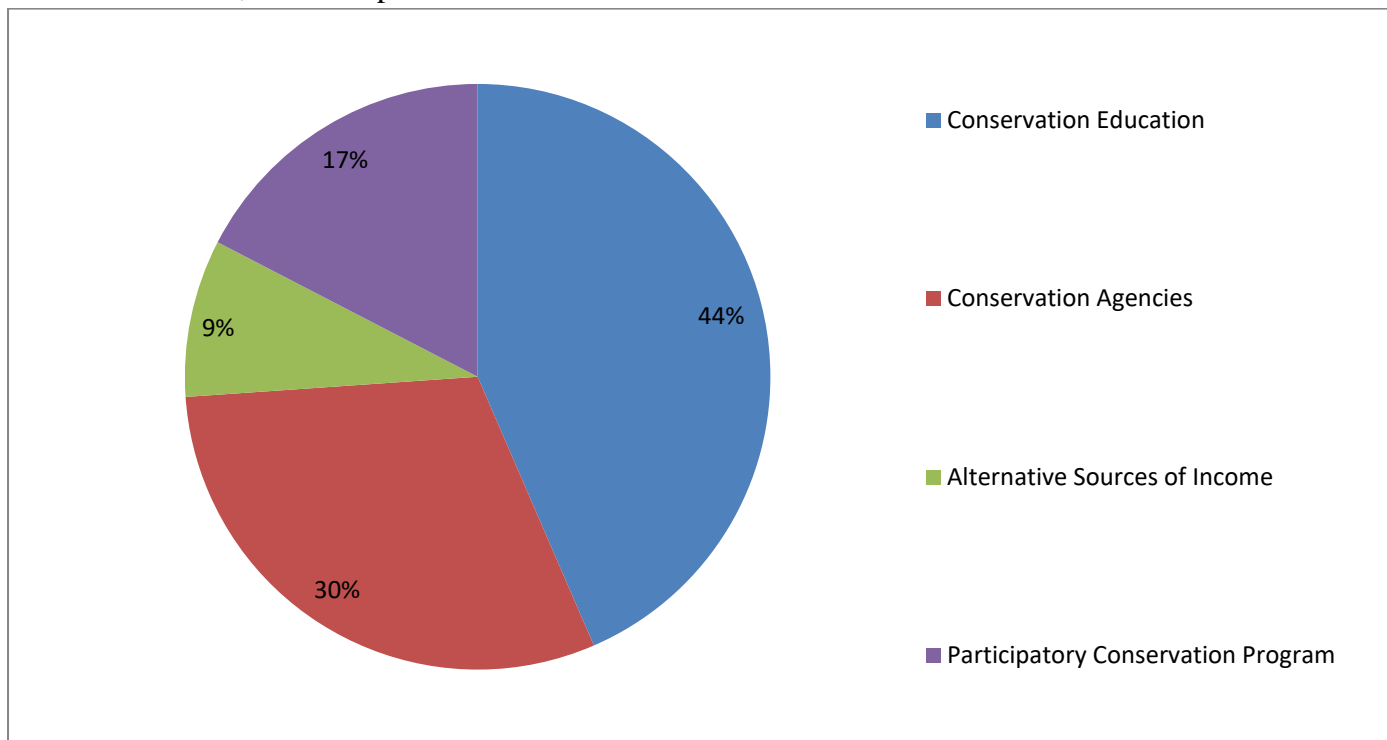


Figure 2: Factors influencing VICOBA member awareness in forest conservation

Conclusion and Recommendation:

Conclusion:

The study indicates that the success of forest conservation largely depends on improving the livelihood of communities especially those living adjacent to forest resources. It was revealed that the VICOBA program aids its members in engaging with small businesses as alternative income-generating activities that are environmentally friendly. The study establishes that factors that influenced VICOBA members' awareness of conservation were conservation education, the presence of conservation agencies (WWF, TFS, and TAFORI), and participatory conservation programs. Also, the study revealed that the VICOBA program has indirectly contributed to forest conservation activities with less concern about allocating funds for conservation activities.

Recommendation:

This study recommends that alternative sources of income-generating activities should be promoted especially in the communities adjacent to forest resources in order to reduce dependence on forest resources for economic purposes.

Proper planning and intervention to integrate forestry conservation and economy, conservation activities must lie parallel with the improvement of people's livelihood and therefore Ministry responsible for tourism and natural resources should formulate proper strategies which integrate resource conservation with economic improvement of local community members.

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