

## **Socio-economic Outcomes of Gendered Participation in Forest Management in Tanzania**

*Pilly Silvano\**

### **Abstract**

Prior to the 1980s, centralized forest management policies in many African countries, including Tanzania, excluded local communities, particularly women, from participating in the management of their forests. In response, participatory forest management (PFM) approaches—including community-based forest management (CBFM), and joint forest management (JFM)—were introduced to empower local communities to participate in forest management and benefit from their forests. Building on existing analysis that highlights more on the impact of PFM on forest conditions, governance and livelihood, this paper examines the socio-economic outcomes of gendered participation in forest management in Kilwa District, Tanzania. Through the feminist political ecology perspective, and utilizing a mixed method approach, it aims to assess the significance of gendered participation in CBFM for achieving improved socio-economic outcomes. The findings indicate that increased gendered participation in CBFM activities increases gendered awareness and understanding of forest-related issues, reduces gender-related conflicts, strengthens social networks and enhances equity in benefit-sharing at the community level. However, these are less achieved at the household level. The distribution of economic benefits to individuals has been hindered by the absence of a well-defined benefit sharing arrangements and the dominance of elites in capturing forest benefits. The paper concludes that increased gender participation in CBFM activities has more social benefits outcomes than economic benefits to women. It recommends revising forest regulations to ensure more economic benefits flow to individuals, thereby incentivizing active participation in forest management. Additionally, gender specific interventions should be implemented to empower both men and women with alternative sources of income to enhance their economic wellbeing, while safeguarding the sustainability forest resources.

**Keywords:** *gender, participation, community based forest management, Tanzania.*

### **1. Introduction**

In recent decades, many developing countries in Africa and Asia have decentralized forest management and promoted the participation of rural communities in the management and utilization of forest resources through participatory forest management (PFM) (Schreckenberg & Luttrell, 2009; Magese et al., 2020). This decentralized approach in forest management takes many different forms, such as CBFM, PFM, community forestry, and

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\* University of Dar es Salaam, Tanzania: [pillyssc@gmail.com](mailto:pillyssc@gmail.com)

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collaborative forest management (Duguma et al., 2022). The underlying premise of these approaches is that the participation of local communities in forest governance and management will lead to socio-economic development and ecological sustainability (Agarwal, 2007). Currently, approximately one-third of the forests in developing countries are managed under some form of CBFM (Gilmour, 2016). This approach has been recognized as an effective vehicle of improving forest governance, promoting sustainable forest resource management, and ensuring gender equality and socio-economic wellbeing of local people in developing countries (Gilmour, 2016). CBFM emphasizes more on equal participation of men and women in forest management activities, meetings, and decision-making processes in forest management institutions as a key to achieving positive outcomes for long-term sustainability (Giri & Darnhofer, 2010; Leisher et al., 2016).

The attention to gender in forest management programmes has been acknowledged in various international frameworks as important in bringing sustainable forest governance (Arora-Jonsson et al., 2019). For instance, the FAO Committee on Forestry included 'Women and Forestry' as one among the six main topics addressed during its biennial meeting in the 1990s, and emphasized the need to integrate gender in FAO forest projects (FAO, 2016). To some extent, the 2030 Agenda for Sustainable Development of 2015 is also concerned with women's participation in social forestry management. Goal No. 5 of the 2030 Agenda for Sustainable Development Goal (SDG) emphasizes on gender equality in all aspects of women's lives, which includes securing their participation and equal opportunities at all levels. In addition, a range of development institutions and policies—including those concerned with natural resource management and forest governance—have attempted to integrate women and gender in their mandates (see, e.g., CIFOR, 2013; FAO & RECOFTC, 2016).

Like many other Sub-Saharan countries, Tanzania has made a significant progress to implement PFM as a response to global and local changes in forest policies. The decision to implement PFM came after recognizing that the management of forests in the country lacked the full participation of local communities and other relevant stakeholders living around forest areas (Jacob & Brockington, 2017). In Tanzania, PFM approaches are manifested as either CBFM or JFM (Blomley & Iddi, 2009). These approaches are legally supported and facilitated by Tanzania's Forest Policy of 1998, and the Forest Act of 2002 (MNRT, 2022), which also emphasize the importance of gender equality in forest management. JFM usually takes place within government-owned forests; with management responsibilities being shared between the government and collaborating communities. On the other hand, CBFM occurs on village lands, where local communities act both as owners and managers of their own forests (MNRT, 2022). Under CBFM, communities have the right to exercise full control

over forest benefits, and are not obligated to share management responsibilities or returns with external actors (Lokina, 2014; MNRT, 2022). According to MNRT (2022), approximately 8% of the total villages in Tanzania are involved in CBFM, covering an area of about 2.2m ha.

The government of Tanzania has implemented significant measures to redress gender disparity inequalities in forestry through policy provisions and a robust legal framework. Gender mainstreaming and promoting gender equitable participation in CBFM projects have been the primary focus. This is evident in the Tanzania Forest Policy (1998), the Forest Act (2002), the National Forestry Programme (2001–2010), CBFM guidelines (2017) and the National CBFM Action Plan (2021–2031). These documents underscore the importance of integrating gender perspectives into forest management projects, with a focus on achieving gender balance in PFM, and involving women in forest management decisions. Furthermore, the government has also formulated policies on Women and Gender Development (2000), the National Strategy for Gender and Development, and the National Vision 2025: all of which further bolster gender equality and women's empowerment across various sectors, including forestry. Additionally, the government has taken steps to promote gender equality in participation by adhering to international and regional agreements, such as the 2030 Agenda for Sustainable Development. All these efforts to mainstream gender equality, particularly through the inclusion of women in development projects like CBFM, are deemed crucial for driving sustainable development (Blomley, 2013).

Since the 1990s there has been a growing interest in examining women's participation and gender dynamics in forest management in various developing countries. Studies conducted by Agarwal (2009a), Coleman and Mwangi (2013), Leisher et al. (2016), and Thapa, Prasai and Pahadi (2020) have demonstrated that empowering women in local decision-making processes can enhance forest resource management and conservation. Despite the available evidence, multiple studies have indicated that the marginalization of women in decision-making continue to persist. Scholars such as Agarwal (2001), Leone (2019), Kirya (2019), and Samndong and Kjosavik (2017) have conducted studies focusing on assessing the extent of gender inclusion/exclusion within forest management institutions and decision-making processes. These studies consistently highlight the ongoing marginalization of women's voices despite the promises of decentralized forest management to empower all community groups. For example, Duguma et al. (2022) found that women's involvement in forest management is merely to fulfil gender representation requirements, without granting them control over significant roles such as decision-making, ownership, and benefits. Similarly, Dressler et al. (2010) found that the implementation of PFM excludes marginalized groups from accessing, using and controlling valuable forest

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resources. Equally, inequalities and marginalisations in PFM have been reported as common across numerous studies in Africa countries, with local elites and most influential community members dominating decision-making processes and capturing forest benefits (Coulibaly-Lingani et al., 2017; Green and Lund, 2015).

However, despite having the most advanced legal frameworks for PFM, research conducted in Tanzania by various scholars (Blomley & Iddi, 2009; Scheba & Mustalahti, 2015) has indicated that PFM—and particularly JFM—has not adequately resulted in positive benefits for forest-dependent communities. These studies have shown that a few powerful and the most influential people tend to benefit more than the poor majority, especially the most marginalized groups within communities. Similarly, researches by Magessa et al. (2020) and Jacob and Brockington (2017) in northern Tanzania have uncovered the dominance of small elite groups in the implementation of PFM, controlling decision-making processes and benefits to the dissatisfaction of other residents. Also, in their studies in southern Tanzania, Killian and Kyle (2020) and Silvano and Kweka (2021) found that rural women are underrepresented and marginalized in forest management decisions, and in the distribution of forest benefits. All these raise the question of how, and to what extent, does CBFM—which has been a key advocate for promoting community participation and gender equality in forest conservation—benefits forest-dependent communities, including women. Therefore, drawing from the insights of the aforementioned studies, this paper uses a gender lens to assess the socio-economic outcomes of CBFM. The aim is to ascertain whether the engagement of women and men in forest conservation lead to positive socio-economic outcomes at the household and community levels.

## **2. Theoretical Framework**

This paper was guided by the feminist political ecology (FPE) framework to understand the outcome of gendered participation in forest management. The FPE treats gender as a critical variable that shapes access and control over natural resources, and interacts with other variables such as class and culture to shape the processes of socio-ecological change; influences natural resource management practices and policies; and struggles to sustain viable livelihoods and prospects for sustainability (Sundberg, 2015). The framework acknowledges that women participation in conservation activities in equal terms as men is crucial for achieving better livelihoods and conservation outcomes (Rocheleau et al., 1996). It also considers both men and women as agents of change in development projects, and emphasizes that equal participation of both in decision-making regarding natural resources can lead to a sense of agency and empowerment; and can increase women's voice and equity in decision-making in development projects such as CBFM (Leach, 2016; Resurreccion & Elmhirst, 2008). Other feminists' works—such as Agarwal

(2009b) and Leisher et al. (2016)—have also indicated that the involvement of both men and women in natural resources management can lead to equity in decision-making and distribution of benefits; thereby increasing the bargaining power of women in decision-making. In that sense, therefore, gender is a key analytical and explanatory variable in the way resources, such as forests, are managed as it helps to understand the outcome of gendered participation, and also measure natural resources governance and livelihoods outcomes.

Several studies have examined livelihoods outcomes of PFM or CBFM, and have brought mixed results. For instance, Lusambo et al. (2021) indicated that PFM has resulted into improved community-level infrastructure such as schools, health centres and roads, but it has had a lesser impact on household income. Mawa et al. (2022) highlighted that collaborative forest management has increased access to financial, social and natural capital among participating households. However, these two studies have largely focused on the impact of CBFM/PFM on the ‘community’, neglecting the variations and power dynamics within a community that can affect who benefits, how and why. On their part, Coleman and Mwangi (2013), Leisher et al (2016), and Westermann et al (2005) focused on gendered participation in forest management institutions, and found that when participation of women is high or equal to that of men in all aspects of decision-making in forest institutions, then gender-based conflicts are less likely to happen. Agrawal (2009a; 2010b) has also shown that involving both men and women in forest management yields benefits by empowering marginalized groups, and offering them a platform to express and act upon their preferences and needs. The study employed the FPE framework as a guide towards understanding the socio-economic outcomes of gendered participation in CBFM.

### **3. Context and Methods**

#### ***3.1 Study Area***

This study was carried out in Kilwa District, which is located in Lindi Region in southern Tanzania. The Kilwa district lies on latitude 8°20' to 9°56', and longitude 38°36' to 39°50' east of Greenwich (Kaunda, 2014). It borders Rufiji District in the north, Lindi and Ruangwa districts in the south; while in the west and east it borders Liwale and the Indian Ocean, respectively. The district is most densely forested with large patches of the East African coastal forests and miombo woodlands covering around 70% of the total land. The surrounding communities are largely dependent on forests in the district. According to the census report of 2022, Kilwa District had a total population of 297,676; with 145,343 males and 152,333 females living in approximately 347,235 households (URT, 2022). The district is one among the poorest districts in Tanzania, with one of the lowest rates of literacy and education achievements. The majority of the rural population in the district depends on agriculture and fishing as the main sources of livelihood.

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The Kilwa district is one among the districts in Tanzania that have successfully implemented CBFM since the 2000s. The Mpingo Conservation Development Initiative (MCDI), a Tanzanian non-governmental organization (NGO), has played an active role in supporting communities within the district to implement CBFM and certify their forests. As of 2020, approximately 14 villages in Kilwa District had adopted CBFM. For the purpose of this study, four villages of these were selected for analysis. These include two villages under CBFM (Kisangi and Kikole), and two villages under non-CBFM (Ruhatwe and Mavuji). Kikole and Kisangi were chosen because of their status as the first villages in the district to adopt CBFM in the early 2000s, and were also the earliest villages in Africa to obtain forest certification under the Forest Stewardship Council in 2009. The villages were also collaborating with various organizations such as the MCDI, World Wide Fund for Nature (WWF), and the Tanzania forest conservation network (MJUMITA) that provide financial and technical support to facilitate the implementation of CBFM activities. Ruhatwe village, a non-CBFM, was included in the study due to its initial involvement in the PFM project under DANIDA. However, the village faced challenges to implement PFM due to border dispute with its neighbouring village. Mavuji village, which is also a non-CBFM, was selected for its strategic location near the main road connecting Dar es Salaam to the Lindi region, and its proximity to the National Forest Reserve. The selected non-CBFM villages had fewer organizations involved in forest conservation.

#### **3.2 Data Collection and Analysis**

Data collection methods included in-depth interviews, focus group discussions (FGDs), and household surveys in Kilwa District between 2019 and 2020. Eight FGDs were held with women's and men's groups (2 in each village); and 35 in-depth interviews were conducted with 7 men and 8 women who were elderly and former members in village natural resource committees (VNRCs). Also, the interviews involved 4 village leaders, 8 VNRC members; and representatives from MJUMITA (2), Kilwa District Forest Office (2), Tanzania Forestry Service (TFS) (1), MCDI(2) and WWF(1). The household survey involved 173 sampled households (95 men, 78 women) at the household level. The interviews gathered information on the historical background of CBFM, stakeholders and their roles, gendered participation, CBFM practices, and benefits. The interviews were supplemented by participant observations in meetings and management activities undertaken at the village level, and a document review. Purposive sampling was used to select villages and key informants for the interviews. The villages were purposively selected based on the presence/absence of CBFM, forest certification, and stakeholders involved. The villages were selected with the aid of MCDI officials. Stratified sampling was employed to select the survey households, including both male and female-headed households, to supplement qualitative information. Information related to the level of awareness, conservation benefits, and household income were collected to assess livelihood outcomes.

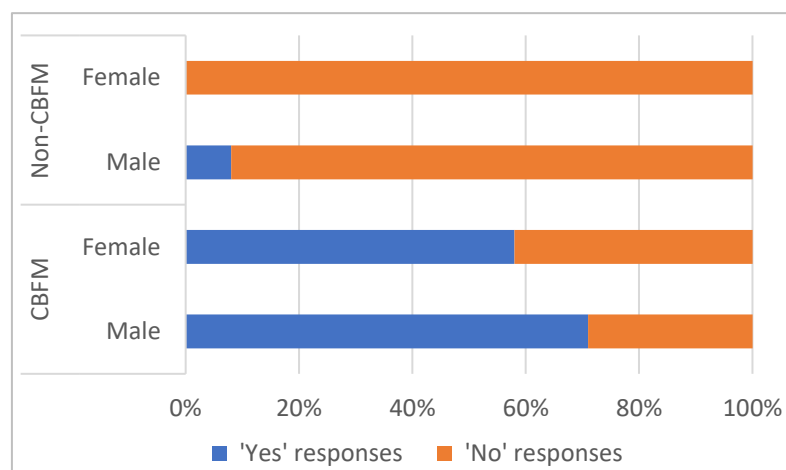
Qualitative data were analysed through content analysis where various codes, themes and contents from interviews and FGD transcripts were generated. The findings from the qualitative data were presented in the form of texts and quotes. On the other hand, the quantitative data from the household survey were coded, processed and analysed using descriptive statistics (frequencies, percentages and cross tabulations) through the Statistical Product and Service Solution (SPSS) software, Version 23; and Microsoft Excel 2015. Quantitative results were presented in percentages and figures.

#### **4. Results and Discussion**

This section presents the findings on the socio-economic outcomes of gendered participation in forest management. It discusses the perceptions of both men and women on whether gender participation in forest management activities has brought any positive outcomes. Various socio-economic outcomes of gendered participation in forest management are discussed below.

##### **4.1 Conservation Knowledge Benefits**

The findings show that increased gendered participation in forest management has enabled both men and women to benefit with training and awareness programs on forest-related issues, gender-related issues and good governance provided by various organizations such as MCDI and WWF. From the household survey, male and female respondents from CBFM and non-CBFM villages were asked whether they feel that they have benefited with conservation knowledge and skills. This question aimed to understand how knowledgeable male and female respondents feel because of their involvement in forest management. Figure 1 presents a summary of the responses.



**Figure 1: Respondents Responses on Conservation Knowledge Benefits**  
Source: Field Data (2019).

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The results in Figure 1 show that over 50% of men and women respondents in the CBFM villages have benefited with conservation knowledge; and felt that their knowledge on various forest-related issues has improved as compared to the non-CBFM respondents. However, there was substantial difference on the responses between men (71%) and women (58%) in the CBFM villages. Unlike in the CBFM villages, over 90% of male and all female respondents in the non-CBFM villages claimed that they had not benefited with conservation knowledge.

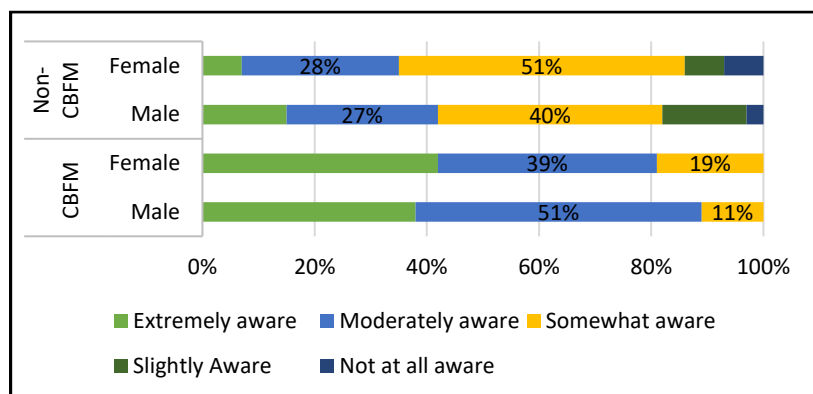
Similar findings were reported from the qualitative interviews. A majority of the men and women interviewed in the CBFM villages mentioned that they had benefited with conservation knowledge provided by the different organizations they were collaborating with. For instance, one female member of VNRC in a CBFM village disclosed:

*We have benefited with various trainings and education programs on forest-related issues provided by MCDI. MCDI has trained us on how to manage our forests, how to conduct forest patrols and control forest fires. They also educate us on various forest rules and regulations* (Interview with a VNRC female member, CBFM village, 2019).

Unlike in the CBFM villages, the majority of male and female respondents interviewed in the non-CBFM villages claimed that they had not benefited with conservation knowledge. They pointed out that there were limited interventions aimed to improve their knowledge and skills on conservation issues. Only a few male members—mostly village leaders and VNRC members—claimed that they had once benefited with conservation knowledge through trainings provided by the TFS and the Kilwa District Forest Office. The lack of conservation knowledge was considered by many respondents as one among the key reasons for increased unsustainable forest practices such as illegal logging in the non-CBFM villages.

Furthermore, a Likert scale was used to measure levels of awareness on various forest-related issues among individuals interviewed at the household level. Figure 2 presents a summary of the findings. The figure illustrates a significant disparity in awareness levels between the CBFM and non-CBFM villages. In the CBFM villages, both men and women exhibit a very high level of awareness compared to the non-CBFM villages. The majority of individuals in the CBFM villages claimed to possess a high level of awareness regarding various forest-related issues, with less than 20% claiming to be less aware. Conversely, the level of awareness of men and women in the non-CBFM villages regarding various forest-related issues was very low. This lack of awareness hinders the ability of members to actively participate in village meetings, voice their opinions, and influence management decisions.





**Figure 1: Respondents Responses on Levels of Awareness**  
 Source: Field Data (2019)

These findings from the household survey were also triangulated with insights from qualitative interviews. The results from the interviews further revealed that forest-related training and awareness programs—provided by various government actors and NGOs, as well as active engagement in village meetings and management activities—have contributed to increased awareness among men and women in the CBFM villages. Participants mentioned that these initiatives have enhanced their understanding of forest protection, management, rules and regulations. Additionally, women in the CBFM villages expressed that the acquired knowledge and skills have boosted their confidence in village meetings, enabled them to voice their opinions and make contributions on agendas. Exposure to trainings and education programs have empowered women, allowing them to realise their rights and potentials in the CBFM context. Some women even demonstrated the courage to compete for membership and leadership positions in the VNRCs. One female member shared her experience, stating:

*... with the increased level of awareness, we have realized the importance of taking role in forest management activities, and we have confidence to voice our opinions, and competing for VNRC membership.* (Interview with a female VNRC member in CBFM village, 2019).

In contrast to the situation in the CBFM villages, non-CBFM members expressed dissatisfaction with limited trainings and education provided on various forest-related issues. They noted that village and forest-related meetings that serve as crucial platform for disseminating information and knowledge on forest-related issues were rarely held. They raised concerns that only members of the village government and VNRCs were benefiting with trainings offered by the District Forest Office and TFS, with little or no feedback being provided to the rest of community members. As a result, a

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knowledge gap emerged between village leaders and community members, impacting decision-making processes during meetings; and hindering active participation of men and women in forest protection and management activities. Some women highlighted that their lack of conservation knowledge had limited their ability to voice their opinions and engage in decision-making processes.

This finding shows that participation in CBFM interventions has enabled both men and women to benefit with conservation knowledge and skills. These findings align with those of researches by scholars in the same district, such as Gross-Camp (2017) and Corbera et al. (2017). For instance, Corbera et al. (2017) documented an increased respondents' knowledge of MCDI's project (CBFM) activities based on gender between 2011 and 2014, indicating improved awareness of activities both for men and women due to their involvement in such initiatives. The authors further argue that the increased knowledge among men and women positively influenced their participation in conservation activities, thereby enhancing project outcomes. Similarly, Agarwal (2009a) affirmed that men and women involvement in forest conservation activities has given them opportunities to benefit more with conservation knowledge provided by different organizations.

#### ***4.2 Improvement on Community Development Projects***

The study's findings indicate that the participation of both men and women in forest management has a positive impact on community development projects, specifically village infrastructure and social services. In the household survey, respondents were asked about any improvement in village infrastructure and social services provision in their respective villages. Over 50% of male and female respondents in the CBFM villages reported improvements in the village infrastructure, as well as in services like healthcare and water services. They attributed these improvements to their active involvement in decision-making regarding the utilization of forest revenues and increased transparency. Some respondents also mentioned that fair decision-making processes and effective leadership contributed to enhanced social services. On the other hand, in the non-CBFM villages, over 90% of male and female respondents claimed that there were no improvement in social services due to forest management activities. They highlighted the lack of participation in decision-making and unequal distribution of forest revenues as reasons for poor infrastructure and social service in their villages.

In the CBFM villages, there were evidences of improved health, water and education service that were established using forest revenues. Women who were interviewed emphasized that social services had improved because both men and women were equally involved in planning how forest revenues should be utilized to enhance the village infrastructure. They were also equally

engaged in prioritizing the most needed village infrastructure and services. Additionally, some village leaders stated that the equal involvement of women and men in decision-making bodies enabled women to prioritize the challenges that the majority of women face—such as limited access to clean and safe water, and inadequate healthcare services—that directly affected their lives, and hence needed immediate attention. One woman in a women FGD expressed this thus:

*Our involvement in forest management decision-making has enabled us to raise our voice on challenges that we face such as the lack of access to clean water ...in the past we used to walk long distances to fetch water from Matandu River, whose quality of water is not good for household use. .... In one village meeting, we proposed to the village government to allocate some of the forest revenues to drill wells in our village. As a result, we now have access to clean water near our homes. This has reduced the time burden for many women in our community (A woman in FGD with women, CBFM village, 2019).*

Moreover, being members of VNRC has enabled both male and female members to get health insurance, granting them access to free health services at the village health centre and beyond. The members mentioned that VNRC health insurance covers up to five dependents, including spouse of each VNRC member, and remains valid until the end of membership. The provision of free health insurance to VNRC members has greatly improved the wellbeing of numerous households led by both men and women in the CBFM villages. Some female VNRC members stated that health insurance has enabled them save money that would have otherwise been spent on healthcare, allowing them to invest in agricultural inputs or small businesses. The availability of health insurance is also a significant incentives for many men and women to compete for membership in the VNRCs.

Conversely, the situation in the non-CBFM villages was quite different. Here, village leaders mentioned that they lack own fund to invest in the village infrastructure. Many infrastructures in their villages have not been realized due to the absence of revenues generated from forest management activities as seen in the CBFM villages. These villages heavily relied on financial supports from external actors, such as the government and NGOs that were not directly involved in forest conservation. For instance, Mavuji village leased part of its land to the Bioshape Company in 2007 for the establishment of a biofuel plantation. The funds received from leasing the land were used to develop village infrastructure like the village market and government office, and to purchase a tractor: all of which were not considered as top priorities by many women. This indicates that the absence of participatory projects as seen in the CBFM villages have left many women in the non-CBFM villages with little opportunity to articulate their needs and interests, consequently perpetuating their marginalization in decision-making that affects their well-being.

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The results further corroborate the earlier works of scholars like Agarwal (2009b) and Kirya (2019), who contended that involving women in decision-making regarding the utilization of forest revenues leads to a greater emphasis on services such as healthcare, clean drinking water and children's education, which are beneficial for the overall wellbeing of all community members. Agarwal (2009b) indicated that women prioritized community concerns differently from men, with a focus on funding water taps, pump installations on village wells, health facilities and services. Similarly, Kirya (2019) indicated that women's participation in forest management decisions contributed to enhanced social service delivery in areas of their concerns, such as in health and water services.

#### **4.3 Perceptions on Enhanced Social Networks**

The involvement of men and women in various aspects of forest management has had a significant impact on social networks. The findings of the study indicate notable increase in social networks in the CBFM villages compared to the non-CBFM villages. During the interviews, participants in the CBFM villages attributed improved social networks with the increased interactions in CBFM activities. The results suggest that meaningful participation of both men and women in village meetings, VNRCs, trainings, and community groups such as the MJUMITA has provided opportunities for increased interaction among community members, including women and their external agencies.

During the discussions, it was observed that prior to the establishment of CBFM, communities had strained relationships with their village leaders and government agencies; and women were limited in their exposure beyond their households and farms. However, with increased interactions through CBFM activities, relationships have significantly improved. These interactions have fostered cooperation, mutual understandings and trust among community members. A female participant in an FGD with women in a CBFM village stated:

*In the past, we [women] were confined within the boundaries of our households' boundaries... but because of CBFM activities, many of us have been motivated to participate in village meetings, become members in the VNRC and other community groups. All these have enabled us to increase our interaction and networks beyond our households (A woman in FGD with women in a CBFM village, 2019).*

These findings demonstrate that participation in CBFM activities have enabled both men and women to strengthen their social networks. During discussions in the CBFM villages, women indicated that the increased social networks have provided them with a platform to exchange ideas and information, and disseminate knowledge and technologies offered through the CBFM project. Some women claimed that the increased social networks have

equipped them with skills and confidence to voice their opinions publicly; and broaden their exposure beyond their households, which served as safety nets during times of economic difficulties.

Likewise, scholars such as Meinzen-Dick and colleagues (2014), and Westermann et al. (2005), have also emphasized the positive impact of local participation in village meetings, management committees, and community groups on improving social networks. Furthermore, Meinzen-Dick et al. (2014) have highlighted the crucial role that social networks play in facilitating the dissemination of information regarding forest management practices.

#### ***4.4 Reduction of Gendered-related Conflicts***

The findings from an interview with district forest officials revealed that gender-related conflicts in forest management happen because of such reasons as excluding women as key stakeholders in decision-making, unfair rules, unequal access to resource use and distribution of benefits, lack of transparency and different interests. However, evidence from the study show that such conflicts have been reduced in the CBFM villages because of CBFM activities. During discussions with women in the CBFM villages, participants reported that before the establishment of CBFM intervention, many gender-related conflicts used to happen because women perceived that men benefited more from forests. Women claimed that they were excluded in decision-making processes, trainings and marginally represented in forest management committees. However, the situation changed after the implementation of CBFM. Regular forest-related meetings and the provision of trainings and education by different organizations increased the understanding of various forest-related issues amongst many women, including their rights and roles.

Also, women reported that CBFM has improved how forest benefits are shared among members, and how men and women are involved in forest management activities, and are represented in VNRCs. All these were reported to have reduced many queries and misunderstandings that used to occur regarding women's roles in forest conservation, how much is earned, and who benefits from it. It was further indicated that the provision of training on governance issues has increased transparency among village leaders; which has in turn made them more accountable to community members, including women. During a discussion, a male participant was quoted saying:

*Before the implementation of CBFM, a lot of gender-related conflicts emerged because women perceived that men benefited more from forest revenues, and were mostly favoured in decision-making. Forest management committees were largely dominated by men. But now women are considered as important agents and are equally involved in management committees, and in every process of decision-making. (A man in a men FGD, CBFM village, 2019).*

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This finding shows that equal participation of women in forest management activities, decision-making, and management committee, together with equality in benefit-sharing: all have reduced gender-related conflicts in the CBFM villages. This finding supports those of earlier scholars such as Leisher (2016), Coleman and Mwangi (2013), Agrawal (2010), and Westermann et al (2005), who also indicated that when participation of women is high or equal to that of men in all aspects of decision-making in forest institutions, then gender-based conflicts are less likely to happen. These scholars further pointed out that when there is a high participation of women in decision-making in forest management institutions, there are more possibilities of women voicing their opinions and influencing management decisions that have impact on their wellbeing; hence supporting socially equitable decision-making within communities.

### ***4.5 Equity in Benefits Sharing***

Equitable sharing of forest-related benefits is essential for enhancing the livelihoods of individuals and promoting participation in conservation initiatives. The study findings indicate disparities in benefit distribution between the CBFM and non-CBFM villages, as well as variations at both individual and community levels.

#### *4.5.1 Benefit Sharing at the Community Level*

During the interviews conducted in the CBFM villages, participants mentioned that the increased participation of men and women in CBFM activities in decision-making processes, and in the formulation of rules and regulations, has influenced how benefits were distributed at the community level. The majority of men and women mentioned that they were initially engaged in the development and approval of bylaws to set out specific rules for benefits-sharing within CBFM during village assemblies. In these village assemblies, male and female community members came to agreements on how forest benefits should be distributed to benefit all members. In the CBFM villages, all revenues generated from certified timber sales were retained at the community level. Approximately 50% of the revenues collected were allocated to community development projects, such as the construction of village infrastructure, water projects, and healthcare facilities that benefit the entire community members. The remaining funds were divided thus: 40% to be used for forest management activities, 5% as voluntary contribution to the local district council, and 5% was given to the MCDI as administrative and technical assistance.

However, the results reveal an emerging conflict regarding the equitable distribution of forest benefits among sub-villages within the CBFM villages. For example, some male and female participants from a distant sub-village (Mikulyungu) in Kisangi village claimed to receive the least benefits despite facing challenges such as restricted access to the forest, crop damage by wild

animals, and loss of land for the establishment and expansion of the VLFR. They highlighted that almost all the revenues generated from the VLFR were allocated towards developing infrastructure in the village centre, with little investment in their own sub-village. Some women also raised concerns about the long distances they had to travel from their homes to access essential services, such as health and education services, at the village centre.

In contrast to the CBFM villages, the non-CBFM villages lacked a formalized mechanism for the distribution of benefits at the village level. According to the interviews with village leaders, the TFS was tasked with collecting forest revenues and confiscating illegally harvested forest products in the state-owned productive forests and general land. An official from the district council disclosed that over 90% of the forest revenues collected from state-owned forests were sent to the central government, with only approximately 5% being allocated to the district council. The extent to which community members in the non-CBFM villages benefited from forest protection and conservation efforts remained unclear. These villages relied primarily on fines and fees imposed on forest products harvested from the government forest reserves, which were deemed insufficient and inequitably distributed.

Many male and female participants in the non-CBFM villages expressed a lack of knowledge regarding the revenues generated by their villages from forests, as well as their distribution. They mentioned that financial decisions were predominantly made by village leaders, with limited transparency on the amount of revenue received from forests, and the allocation of associated benefits. Consequently, this situation discouraged many men and women in the non-CBFM villages from actively engaging in conservation activities. These findings are consistent with Gross-Camp (2017), who highlighted that most socio-economic benefits from CBFM are realized at the village level rather than at the household level. Similarly, studies by Blomley (2013) and Blomley and Iddi (2009) underscored that unequal distribution of forest benefits is a significant factor demotivating community members from participating in forest conservation; and leading to others engaging in illegal harvesting of forest products.

#### *4.5.2 Benefit Sharing Arrangement at the Individual Level*

The findings indicate that there is a lack of a formal agreement regarding how forest revenues should be distributed to individuals at the household level, both in the CBFM and non-CBFM villages. In the CBFM villages, both men and women interviewed mentioned that they only receive cash payments when they participate in activities like forest patrols, clearing fire breaks, and tree planting. However, these activities are often seasonal, and not all residents have opportunities to take part in them. Also, the payments given to such individuals are considered insufficient to make significant improvements in

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their lives. For example, payment for forest patrol range from TZS5,000–10,000 per day for one person. According to a household survey, more than 60% of male and female respondents stated that their households did not benefit financially from CBFM activities, while less than 40% claimed to have benefited.

Those who reported not to have benefited from CBFM expressed their concerns about the misappropriation of forest benefits by elites. In Kikole village, participants accused certain members of the village government and the VNRC of misusing forest revenues to pay for meeting allowances and forest patrols instead of investing in community development projects that would benefit all community members. In Kisangi village, participants complained that VNRC members and village government leaders had better access to training opportunities on forest-related matters and alternative livelihoods activities compared to other community members, hence reinforcing inequalities in the distribution of benefits between village leaders and the rest of the community. Inequities in benefit-sharing were also reported in the non-CBFM villages, where some male members accused their village leaders of cooperating with illegal loggers and accepting bribes for illegally harvested timber. They also mentioned that village leaders often confiscated illegally harvested forest products and imposed fines on offenders, but rarely report such incidents during village meetings. A man interviewed in one non-CBFM village stated:

*We are not benefiting economically from our village forests. Financial reports are rarely presented by village leaders during meetings. Personally, I have never heard about any specific report concerning forest revenues and how they have been allocated. Sometimes they have caught people harvesting timber illegally within the forest, but these incidents are never report to us...* (A man interviewed in non-CBFM village, 2019).

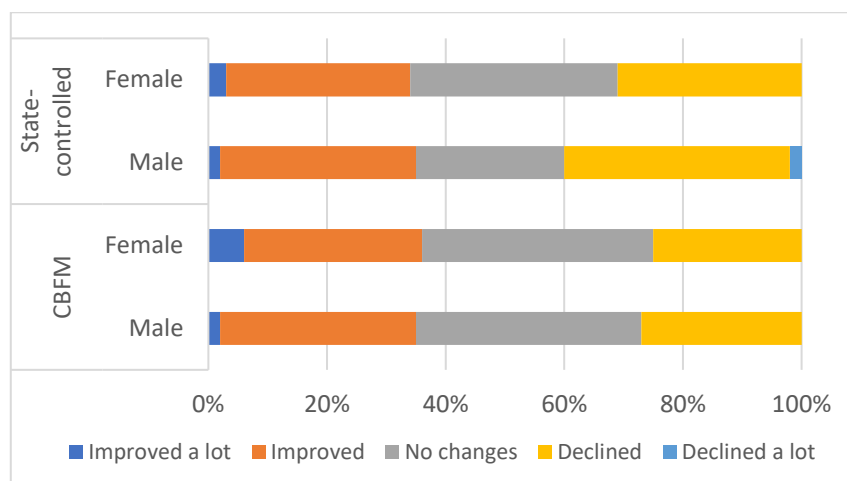
The elite capture of forest benefits within the CBFM villages has also been reported by various scholars, such as Lund and Saito-Jensen (2014), Jacob and Brockington (2017), and Magesa et al. (2020).

#### **4.6 Perceptions on the Changes in Household Income**

During the household survey, both male and female respondents were asked about their perceptions on the changes on household income over the past five (5) years. These questions aimed to establish whether the increased CBFM activities have had any impact on household income. Figure 3 summarizes the respondents' responses.

The findings presented in Figure 3 indicate that there was no significant difference between the CBFM and non-CBFM villages on the respondents' perceptions of changes in household income over the past five years. In both sites, less than 40% of male and female respondents reported an increase in





**Figure 3: Respondents’ Perceptions on Changes in Household Income (N=173)**

Source: Field Data (2018)

their household income. Similarly, less than 40% stated that their income had remained unchanged, while less than 40% claimed a decline in their income. These results suggest that the impact of individuals’ involvement in forest management activities on their household incomes is still limited.

Similar conclusions were drawn from qualitative interviews, where the majority of men and women expressed that the financial benefit they receive from participating in forest management activities, such as forest patrols, are insufficient to enhance their household income. Many interviewees mentioned that they heavily rely on sesame production to improve their income, which enable them to invest in their small businesses, buy new assets, or renovate their houses. A female participant in an FGD in a CBFM village disclosed:

*The allowance we receive as individuals from engaging in forest management activities are still very low. One can use it to change a household meal, but it is inadequate for investing in small businesses or buying new assets like land. Many of us depend on the income we earn from sesame production to improve our lives. (A woman in a mixed FGD in CBFM village, 2019).*

Furthermore, the establishment of CBFM is associated with the formulation of forest regulations that govern forest user rights, access, and benefit-sharing mechanism. The introduction of restrictions on harvesting forest products has affected some community members who previously relied on forest resources as sources of income. Some male participants mentioned their involvement in timber and charcoal business, as well as in timber harvesting prior to the

implementation of CBFM. However, after the establishment of CBFM some faced challenges to sustain their livelihoods. The decisions of some male members engaged in timber business to leave their families and migrate outside their villages to look for other livelihood opportunities has led to an increased work burden among many women left behind in the villages. This situation has also put a significant pressure on forests outside the CBFM villages. A male respondent interviewed from a CBFM village said:

*I work as a carpenter and in the past I used to get timber from our village forest. But with the new rules implemented under CBFM, I have nowhere to get timber for my business. My source of income has been disrupted. Sometimes I have to travel to remote villages where CBFM is not operating to find timber.* (Male respondent interviewed in a CBFM village, 2018).

Moreover, male and female participants highlighted during FGDs that they have lost their farmlands because of the establishment and expansion of the VLFR under CBFM. However, they expressed their disappointments that they have neither received any form of compensation for their lost farms, nor benefitted from the VLFR. These observations align with findings from other scholars such as Luswaga and Nuppenau (2020), Jacob and Brockington (2017), and Gross-Camp (2017), who indicated that CBFM activities have brought little impact on individual's income at the household level. These scholars have also concurred that the benefits individuals gain from their participation in forest management activities remain limited. Furthermore, studies by Sungusia et al. (2020), and Vyamana et al. (2009), have indicated that the implementation of CBFM, coupled with increased forest restrictions, have had adverse effects on people's income.

## **5. Conclusion and Recommendations**

This paper concludes that increasing gender participation in CBFM is crucial for achieving better positive outcomes. The study results show that gender participation has raised awareness on forest-related issues, reduced gender conflicts, and improved social networks and equity in benefit-sharing at the community level. However, the economic benefits at the household level have not been fully realized. The issue of elite capture and control over forest benefits has impacted on how benefits are distributed at the household level. This lack of economic benefits may cause some individuals to lose interest in forest management, and instead seek other ways to earn income from the forests, regardless of the consequences. Therefore, it is essential for the Ministry of Natural Resources and Tourism and other CBFM stakeholders to develop more effective strategies to economically empower both men and women, thus boosting their incentive to participate in conservation activities. Additionally, there is a necessity to revise forest regulations to ensure more economic benefits reach individuals, which will provide them with incentives to participate in forest management.

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