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Original Article

Socio-Cultural Factors Influencing Community Participation in the Joint Forest Management: A Case of Uzungwa Scarp Nature Forest Reserve, Tanzania

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Keywords:

Joint Forest Management, Community Participation, Uzungwa Scarp Nature Forest Reserve, Socio-Ecological System Theory, Conservation.

This study emphasizes the critical role of participatory approaches, particularly joint forest management (JFM), in addressing the escalating threat to forests posed by human activities. Focusing on the socio-cultural aspects, the research explores the factors influencing community participation in joint forest management within Tanzania's Uzungwa Scarp Nature Forest Reserve (USNFR), employing the Socio-Ecological System theory to underscore the potential of community-driven resource management. The study employed a cross-sectional research design, collecting data through questionnaires, focus group discussions, and interviews involving 190 respondents from five villages spanning Kilolo, Mufindi, and Mlimba Districts. Quantitative data underwent descriptive statistical analysis, while qualitative data were subjected to thematic analysis. The majority of the respondents were relatively young, likely due to their physical fitness and heightened environmental commitment. Conversely, older individuals were underrepresented, likely due to age-related limitations. Gender imbalances were observed, reflecting deeply ingrained gender-related barriers in societal norms. Education levels varied, with a significant portion having completed primary education, while higher levels of education were less represented. The respondents were predominantly married, indicating a probable tie to family responsibilities. Farming was the main occupation for the majority, highlighting their dependence on forest resources. Effective communication emerged as pivotal during village assemblies and workshops, fostering awareness and empowerment for successful joint forest management. Cultural factors significantly influenced community participation in JFM within the USNFR. Ritual activities, local knowledge, and power dynamics played key roles, creating taboos and restrictions that reinforced cultural ties to conservation, leveraging the influence of community elders. To enhance community involvement, the current influential factors should be preserved and enforced. Also, to ensure tailored conservation training programs, context-specific communication tools, promotion of cultural integration, and ensuring inclusivity in all JFM aspects. Future research should focus on assessing the impact of training programs on forest conservation.

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INTRODUCTION

Forests have great environmental importance due to their biodiversity and ecosystem services (Persha & Meshack, 2016). Forests play a crucial role in supporting human livelihoods, as a result, they have gained global attention (FAO, 2020). Community participation in JFM has gained global recognition as an effective approach to sustainable forest management, resulting in positive outcomes such as forest regeneration, biodiversity conservation, and livelihood improvement (Pandey *et al.*, 2018). However, community participation in JFM is influenced by various global factors. The socioeconomic context, including poverty levels and limited resources, presents challenges to community involvement (United Nations, 2015). Legal and policy frameworks play a significant role, with supportive legislation empowering local communities in forest management (World Bank, 2018). Institutional capacity, governance structures, and access to information and communication channels are essential for enhancing community engagement. External factors, including international donor support and partnerships, facilitate community participation through technical assistance, financial resources, and capacity-building opportunities (United Nations, 2015).

Limited community participation in forest management hindered sustainable forest

management efforts in Tanzania, exacerbating the issue of deforestation and resulting in an alarming annual loss of forest cover (Conceição, 2019). To address this issue, the government introduced Participatory Forest Management system, with JFM being part of the approach implemented on a significant land area (Saha *et al.*, 2019). The National Land Policy of 1998 and the Forest Act of 2002 have promoted community participation in JFM, contributing to forest conservation and poverty reduction (Lokina, 2014; Persha & Meshack, 2016). The implementation of the PFM resulting in positive outcomes including increased forest cover, sustainable resource use, and income generation (Kiwango *et al.*, 2019). Previous studies examined awareness, impacts, and effectiveness of JFM in conserving forests (Phiri *et al.*, 2012), as well as its contribution to livelihoods (Tarimo & Ringo, 2016).

Effective forest management hinges on the active participation of local communities, who rely on forests for their livelihoods and engage in JFM initiatives. Community participation in JFM is influenced by various factors at a global to local levels. Apart from the success to enhance community participation through government and non-governmental agencies on the JFM initiatives at USNFR, however what influences community participation remains with limited empirical information. Therefore, this study was crucial to be conducted so as to comprehend the socio-

cultural factors that influence community participation in JFM within the USNFR.

LITERATURE REVIEW

Review of Theoretical Literature

This study adhered to the Socio-Ecological System (SES) theory, developed by Elinor Ostrom and her colleagues in the 1980s, which delves into sustainable communal management of shared natural resources (Ostrom, 2009). Emphasizing the interdependence of human societies and the natural environment (Folke *et al.*, 2008), SES comprises a biological-geophysical unit intricately linked with social actors and institutions (Berkes *et al.*, 2008). It underscores the necessity of holistic approaches to natural resource management, integrating both social and ecological dimensions of sustainability (Berkes *et al.*, 2008). Broadly applicable in sociology and ecology, SES theory informs the management of resources like forests and water, informing policies for sustainable resource use (Cumming and Allen, 2017). Integrated socio-cultural elements, as proposed by de la Mora *et al.* (2021), improve community access to natural resources. Notably, the SES theory contends that forest protection and management alone cannot prevent deforestation; engagement with neighboring communities and enhancement of their social welfare through institutional engagement are imperative. In this study, we examined how socio-cultural factors influence community participation in the JFM program, aligning with the SES theory's focus on the social dimension of natural resource management, illuminating the impact of human decisions on the environment. The study challenges the conventional notion that only the government is an effective manager of common-pool resources, emphasizing that communities can effectively manage such resources through collective action and cooperation.

Review of Empirical Literature

Community awareness and understanding of JFM can influence their participation in forest management. Descriptive quantitative research by Zande and Mzuza (2022) aimed at analysing the

elements that affects community involvement in managing forests in the Kangankundi Village Forest area in the Balaka District of Southern Malawi. Results illustrated that there was a statistically significant link between the participation of the community in forest management and community awareness. To back the above findings, Togolai (2015) used the Kimboza Forest Reserve as a case study to examine the factors affecting the efficiency of the JFM strategy for the protection and management of Tanzania's forest reserves. In Kimboza Forest Reserve, the efficiency of JFM was related to community participation in JFM activities and was found to be significantly influenced by awareness of JFM, satisfaction with JFM, training, and membership in the environment committee.

The way that forest ownership and management are perceived can also have a significant impact on community involvement in JFM. Often, communities may believe that they have a stronger claim to the forest and its resources (Togolai, 2015). The author suggested that forest officers should act as facilitators and empower leaders of environmental committees to make decisions. This would help to foster a sense of ownership among community members and encourage them to protect forest reserve even in the absence of forest officers. The SES theory also highlights the importance of collective management of forests as a common resource (de la Mora *et al.*, 2021), which can lead to greater support for JFM initiatives and increased participation in decision-making processes.

Ritual activities hold cultural and religious significance within the community and serve to strengthen the connection between the people and the forest. Ceremonies, prayers, and other traditional practices are employed to emphasize the sacredness of the forest and promote its sustainable management (Pandey *et al.*, 2018; Elias *et al.*, 2020). Also, local knowledge and traditional practices contribute to community engagement in JFM. Passed down through generations, traditional ecological knowledge

provides valuable insights into sustainable resource use, forest management techniques, and biodiversity conservation (Mishra *et al.*, 2013). Communities draw upon this knowledge to make informed decisions regarding forest management strategies, thereby enhancing their ownership and involvement in JFM initiatives (Francis *et al.*, 2015; Evardone *et al.*, 2021). Recognizing and incorporating traditional practices within JFM frameworks not only acknowledges the importance of local wisdom but also strengthens community participation in JFM.

Norms and values within a community influence their participation in JFM. Social norms, such as mutual trust, reciprocity, and cooperation, can foster collective action and collaboration in forest management (Beyene *et al.*, 2018; Biswas & Rai, 2021). Shared values related to environmental stewardship, intergenerational equity, and community well-being also shape community members' motivation to participate in JFM initiatives (Kidenya, 2015). These norms and values provide a moral framework that encourages individuals to engage in sustainable forest practices and contribute to the overall success of JFM.

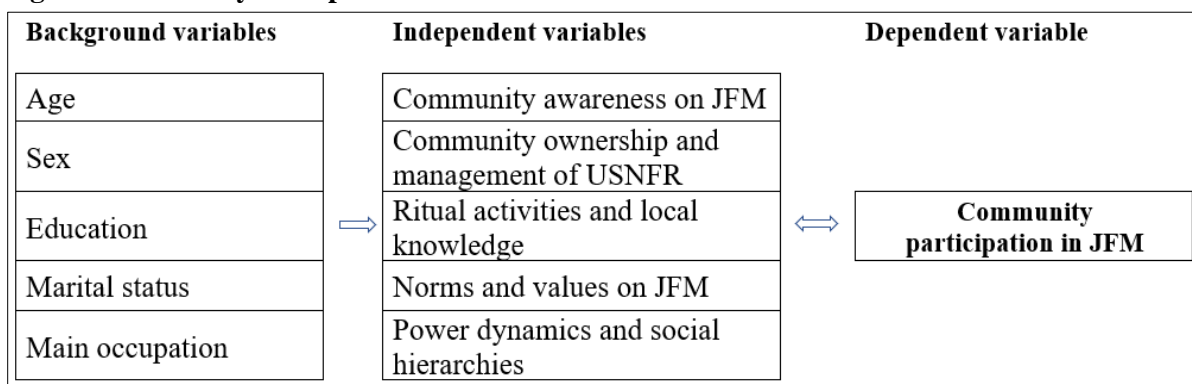
Power dynamics and social hierarchies can influence community participation in JFM.

Unequal power relations and exclusionary practices may limit the involvement of marginalized groups, including women, indigenous communities, and low-income households (Mishra *et al.*, 2013; Taherdoost, 2016). Gender norms and patriarchal structures can further exacerbate these disparities, impacting women's access to decision-making processes and benefits from forest resources (Elias *et al.*, 2020). Addressing power imbalances and promoting inclusive participation are crucial for ensuring equitable engagement in JFM.

Study Conceptual Framework

Figure 1 illustrates the interconnectedness of socio-cultural factors influenced community participation in JFM and the overall sustainability of the USNFR. Community awareness and perception of forest ownership and management are crucial social factors. The ownership and management strongly influence their engagement, instilling a sense of ownership and empowerment, motivating active involvement in JFM activities. Ritual activities, norms, and power dynamic hold deep cultural and religious significance enriches community participation by offering insights into responsible resource use, effective forest management, and biodiversity conservation.

Figure 1: The study conceptual framework



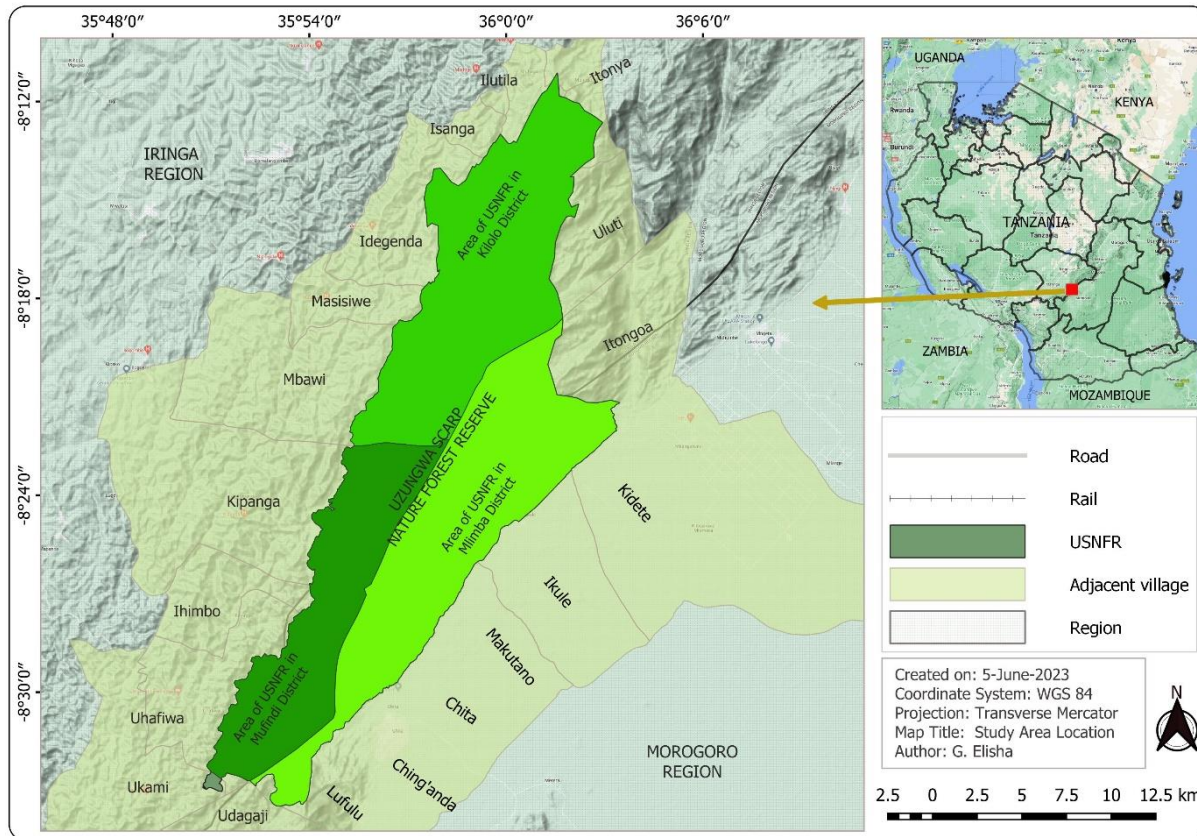
Source: Author (2023)

MATERIALS AND METHODS

Figure 2 depicts the study area included the purposively selected three Tanzanian districts: Mlimba, Mufindi, and Kilolo Districts, adjacent to USNFR, renowned for their biodiversity and

unfortunately impacted by detrimental human activities. The study focused on five out of 19 villages neighbouring the USNFR, aiming to find out the socio-cultural aspects that influence community engagement in JFM initiatives.

Figure 2: Map of Tanzania highlighting the study area



Source: Author (2023)

Data were collected using a mixed research approach, combining both quantitative and qualitative methods. The quantitative data was gathered through questionnaires from 155 community members, while qualitative data was obtained from three focus group discussions with village natural resources committees each with 10 discussants, and five interviews with village leaders, community development officer, and USNFR officer (*Table 1*). The study employed a cross-sectional research design, allowing data collection from a representative sample. The data

were then analysed using descriptive statistics and thematic analysis to identify patterns and relationships among factors influencing community participation in JFM. The research ensured validity through triangulation methods and adherence to ethical guidelines while enhancing reliability through accurate translation, pre-testing, and ensuring clarity in language use. This comprehensive approach aimed to shed light on the critical role of community involvement in JFM initiatives for sustainable forest management.

Table 1: Sample size and its strata

District	Ward	Village	Village adult Population (Nx)	The population of the study			
				Sample [(Nx/N)*n]	FGD	Interview	Total
Mlimba	Mchombe	Ikule	4900	56	5	1	62
		Kidete	2106	24	5	1	30
Mufindi	Ihimbo	Ihimbo	2056	24	10	1	35
Kilolo	Masisiwe	Masisiwe	2210	26	5	1	32
		Mbawi	2117	25	5	1	31
Total			N = 13389	n = 155	30	5	190

Source: Author (2023)

RESULTS AND DISCUSSION

Demographic Findings of the Respondents

Table 2 presents key demographic characteristics of the 155 respondents in the study. It provides an overview of their age distribution, with a substantial majority (88.4%) falling within the 18-50 age range, indicating a younger respondents

profile. Table 2 also highlights a gender imbalance, with 65.2% of the respondents being male. Additionally, it details their education levels, marital status, and main occupations, emphasizing that the majority (94.8%) identified as farmers, underscoring their reliance on forest resources in the context of the study.

Table 2: Demographic information of the respondents

	Variable	Frequency (n = 155)	Percent (%)
Age (years)	18-30	68	43.9
	31-50	69	44.5
	51-70	17	11
	71-80	1	0.6
Sex	Female	54	34.8
	Male	101	65.2
Education level	Informal	3	1.9
	Primary	136	87.7
	Secondary	14	9
	Tertiary	1	0.6
	Vocational	1	0.6
Marital status	Divorced	6	3.9
	Married	121	78.1
	Single	25	16.1
	Widowed	3	1.9
Main occupation	Businessperson	2	1.3
	Employee	1	0.6
	Farmer	147	94.8
	Livestock	5	3.2

Source: Field data (2023)

The study, predominantly featured younger individuals, indicating a potential for active involvement in JFM, possibly due to their physical fitness and environmental commitment. Conversely, older individuals were less represented, possibly due to age-related limitations, aligning with insights from Luswaga and Nuppenau (2020) regarding the decline of capabilities as age progresses. A gender disparity was less evident, with more male respondents, suggesting the presence of gender-related barriers, possibly rooted in societal norms. Comparable findings were highlighted by Elias *et al.* (2020) in India, where JFM implementation showcased a participation rate of 20-30% for women. Similarly, Kidenya (2015) noted low female participation (37%) in natural forest management projects, attributing this to traditional and cultural influences. Regarding education, most

respondents had completed primary education, implying that educational barriers may not be substantial. However, the limited representation of higher education levels suggests that those with advanced education might prioritize other professions over JFM, in line with Kidenya's (2015) who noted similar trends in education but pointed out the lack of profound knowledge and skills in natural forest management. A significant proportion were married, potentially due to family responsibilities. These findings align with Francis *et al.*'s (2015), highlighting that married individual predominantly accessed resources in Udzungwa Mountains National Park through JFM initiatives. The majority of respondents identified as farmers (94.8%), underscoring the major economic activity. This aligns with the region's prevailing agricultural context (URT, 2016).

These demographic insights shed light on cultural factors influencing JFM engagement in the area.

Social Factors Influencing Community Participation in the USNFR's JFM

Table 3: Community awareness on JFM

	Variable	Frequency	Percent (%)
Respondents' awareness of JFM	Yes	146	94.2
	No	9	5.8
	Total	155	100
Respondents' sources of awareness of JFM	Training and workshops	4	2.7
	Village General Assembly	142	97.3
	Total	146	100

Source: Field data (2023)

Community Awareness on JFM

Table 3 depicts that majority (94.2%) of respondents were aware of the concept of JFM. This high awareness level reflects a successful dissemination of information about JFM within the surveyed community and could be attributed to previous knowledge, community engagement in JFM initiatives and the tangible positive outcome of JFM on the local environment. However, the minority response of 5.8% of respondents indicating lack of awareness points to potential gaps in communication include insufficient outreach efforts to specific segments of the community, language barriers, or limited exposure to information-sharing platforms.

The findings regarding awareness of the JFM concept aligned with the insights gathered from the FGD with Village Natural Resources Committee (VNRC) members. The discussants revealed a unanimous agreement on the community's elevated awareness of JFM. It was quoted from a VNRC members that

“This heightened awareness is substantiated by information sharing through story telling by elders, meetings and training, an increased readiness among villagers to share forest and environmental information that resulted into the decrease in illicit activities, and a perception of secure water sources and flourishing forests that consistently provide ecosystem services to the community”

Table 3 illustrates an overview of the community's awareness and knowledge regarding JFM within the USNFR, alongside the methods used to create awareness and their perceived effectiveness.

(Respondent in a FGD, Mufindi District, 13/07/2023).

In the course of the interview with the Forest Officer, similar findings on the impacts of the JFM awareness was noted that:

“The impact of the level of awareness lead to a decrease in the number of illegal activities encountered during patrols in the USNFR”
(Respondent, Mufindi District, 13/07/2023).

The awareness and recognition of JFM possess the potential to drive active engagement in conservation endeavours, making substantial contributions to the preservation of biodiversity, the prevention of deforestation, and the mitigation of climate change impacts. In a similar vein, Mpokigwa's research in 2010 focused on investigating the role of Communication, Education, and Public Awareness (CEPA) in relation to community participation in forest management within Mufindi District. The study revealed that public awareness had a statistically significant and positive influence on community participation in forest management. Also, Gbate *et al.* (2013) studied the theme of decentralization in the forestry sector and its potential implications. Their study found that, introduction of communication within a group of harvesters was shown to moderate and homogenize their behaviour concerning forest use. This underscores the importance of programs like JFM, which facilitate enhanced communication and collective decision-making, enabling communities to use

their resources sustainably and for mutual benefit. Interestingly, the results of our study diverge from the observations made by Persha and Meshack (2016), who highlighted a significant number of villagers with limited awareness regarding JFM. These villagers displayed a limited comprehension of their village's responsibilities and their role in forest management.

Respondents' Sources of Awareness of JFM

The study revealed that majority of respondents indicated that Village General Assembly (VGA) was the main source for creating JFM awareness (97.3%) This outcome could be attributed to the central role that VGAs play in local communication channels. On the other hand, the minority response of 2.7% favouring training and workshops underscores the potential effectiveness of focused educational initiatives. Reasons for these preferences could involve the familiarity and accessibility of VGAs as well as the interactive nature of workshops. The differences might also stem from individual preferences for different learning environments.

The FGD with VNRC members revealed key strategies to enhance understanding of JFM in USNFR. Collaboration between VNRC, foresters, and armed rangers in joint patrols emerged as a significant strategy, embodying direct community involvement in forest protection, aligning with community participation theme in *Table 3*. Conservation education was highlighted, disseminated through various channels including VGAs, Kitongoji/Street meetings, and ceremonies. VGAs emerged as a primary source of JFM awareness, emphasizing their crucial role in informing the community. Additionally, community-based projects like beekeeping, fish farming, and tree cultivation were noted for effectively showcasing the benefits of sustainable resource management, aligning with the preference for practical initiatives seen in *Table 3*.

During the interview in Mlimba District respondents emphasized the sources of JFM awareness:

“Vital awareness campaigns on forest conservation are conducted during Village General Assemblies (VGAs) and ward meetings, as well as at significant community events like funerals and religious gatherings in local churches and mosques. This comprehensive approach is dedicated to the preservation of the village's natural forests and crucial water sources. The VGAs playing a central role in creating the JFM awareness. Importantly, members of the VNRC and forest officers are provided with opportunities during the VGAs to expound upon essential matters pertaining to JFM. These VGAs serve as the primary mode of communication and information-sharing among JFM stakeholders in our village” (Respondent, Mlimba District, 17/07/2023).

“Village by-laws derived from national laws, serving to enhance community awareness. These by-laws guide acceptable actions in the forest reserve, fostering increased awareness and understanding of JFM within the USNFR. These by-laws are communicated and shared well by means of Village meetings, village news' boards, and by using microphones throughout the village area” (Respondent, Mlimba District, 17/07/2023).

These findings light a prominent role for the VGA as the primary platform for disseminating information about JFM. Its overwhelming usage by the majority signifies its importance in driving awareness. This study findings are similar with what Elias *et al.* (2020) noted on the community-oriented nature of JFM awareness initiatives, where local gatherings play a vital role in nurturing understanding and participation. Similar findings on the VGA as pivotal communication platform were noted in the study of Luswaga and Nuppenau (2020). Additionally, the minor variations in the utilization of other methods highlight the diverse channels through which awareness is cultivated. Overall, these findings underline the significance of tailored communication strategies in fostering a

comprehensive understanding of JFM within the community.

Community Involvement in Forest Ownership and Management

Table 4 presents the findings on the community's perception of involvement in forest ownership and management within the USNFR show that a majority (75.5%) of respondents indicated a

strong sense of ownership and active involvement, potentially reflecting the success of initiatives like JFM in fostering community engagement. While minority (7.7%) of respondents indicated a lack of engagement and ownership, suggesting the presence of individuals who might feel disconnected or excluded from forest management activities, requiring targeted strategies to enhance inclusivity and awareness.

Table 4: Community involvement in forest ownership and management

Community involvement in forest ownership and management	Frequency	Percent (%)
Lack of engagement and ownership	12	7.7
Involved in moderate way	26	16.8
Strong sense of ownership and involvement	117	75.5
Total	155	100

Source: Field data (2023)

During the FGD with VNRC members, it became evident that the community's profound sense of ownership and their proactive approach to forest management significantly contribute to their active participation in forest conservation endeavours. The discussion highlighted that instances of illegal activities within the forest reserve were fewer than expected, partly due to the community's active engagement in conservation initiatives. This alignment with the community's commitment to a range of conservation activities, including involvement in patrols, meetings, workshops, and livelihood projects, underscores their genuine dedication to the preservation and sustainable management of the forest

During interviews, respondents on the level of awareness and its impact, the following observation emerged:

“The degree of ownership and management of the forest reserve is indeed highly significant. This is primarily attributed to the tangible benefits that the forest provides, the active involvement of community members in various forest-related activities, and the projects associated with it. These advantages encompass an enhancement in individual income, the availability of a wide range of forest products such as firewood and local medicines, and the assurance of reliable

water sources” (Respondent, Mlimba District, 17/07/2023).

“In this community, a high level of awareness regarding JFM prevailed due to actively engage in various conservation efforts, including training, meetings, boundary maintenance, firefighting, livelihood projects, support for researchers, and joint patrols. This heightened awareness is closely tied to the community's strong sense of ownership of the forest reserve. This ownership might strongly motivate their voluntary involvement in forest conservation activities, reflecting their genuine commitment to safeguarding the forest” (Respondent, Kilolo District, 13/07/2023).

The community's perception of forest ownership within the USNFR, as demonstrated in Table 4 aligns with the notion that ownership perceptions significantly shape community participation in JFM, supported by Togolai (2015), who suggests empowering community leaders to enhance ownership. The Socio-Ecological System theory by Berkes *et al.* (2008) underscores collective forest management's importance, fostering greater JFM support and participation in decision-making. In a FGDs with VNRC members, the community's strong sense of ownership and proactive forest management emerged as drivers for enthusiastic engagement in conservation

efforts. This resulted in reduced illegal activities due to the community's vigilant conservation practices. Interviewed respondents highlighted the community's high level of awareness, describing their active participation in JFM activities such as accessing NTFPs, patrols, workshops, and reporting illegal activities. This shared sense of ownership and commitment reflects the dynamic relationship between ownership perceptions and active community involvement in JFM, resonating with both the research findings and theoretical perspectives.

Cultural Factors Influencing Community Participation in the USNFR's JFM

Ritual Activities That Play Roles in Community Participation in JFM

Regarding the role of ritual activities in community participation within JFM (Table 5) it

was found that, a minority (42.6%) of respondents acknowledged the significance of ritual activities in shaping JFM engagement. This recognition might stem from a deep-rooted cultural connection, an understanding of rituals' ecological importance, and an appreciation for their holistic contributions to forest conservation. In contrast, the majority (57.4%) were unaware of such ritual involvement, potentially due to generational shifts, urbanization, or a perceived weakening of cultural ties. This disparity underscores diverse perspectives within the community on the role of rituals on community participation in forest management. The breakdown of ritual types revealed a predominant emphasis on traditional medicine (53.0%), possibly reflecting continued reliance on their expertise for community well-being. Concurrently, traditional dances (47%) underscore ongoing efforts to maintain cultural practices despite evolving dynamics.

Table 5: Ritual activities that play roles in community participation in JFM

Variable	Frequency	Percent (%)	
Respondents' awareness of ritual activities	Yes	66	42.6
	No	89	57.4
	Total	155	100
Types of ritual activities that influences community participation	Traditional dances	31	47.0
	Traditional medicine	35	53.0
	Total	66	100

Source: Field data (2023)

The FGDs uncovered a profound connection between ritual activities, local wisdom, and community engagement in JFM. Rituals like traditional dances and healing by herbalists became more than cultural practices they evolved into guardians of forest preservation. For instance, the Lusangula dance by the Njuga group conveyed messages of forest preservation, highlighting the close link between culture and environmental stewardship. Local knowledge deeply rooted in the nearby villages played a significant role in influencing participation in JFM. Ritual areas were treated as sanctuaries, protected except during appropriate occasions, showcasing the community's reverence for these sacred spaces believed to be guarded by supernatural forces. Elders played a vital role in passing down forest preservation values through storytelling to the

younger generation. Additionally, traditional healers benefited from gathering herbs from the forests, contributing to community well-being.

During the interviews it was noted that:

“There are impacts of ritual activities and local knowledge on community participation in JFM such as ritual activities (family rituals conducted in the family graves present in the forest) and Local knowledge (the use of local medicine) present in this area has influenced the community participation in JFM because people are not entering the areas in the forest where ritual activities are conducted (holy areas) and this has contributed in the forest conservation. However, there is the presence of holy places like churches and mosques and availability of dispensary in the village make

ritual activities not so famous as it was before these advancements” (Respondent, Mufindi District, 16/07/2023).

“The power of community elders has encouraged the community participation in JFM through education, and insisting tree planting, protecting parts of forest through cultural practices that act as a guide to community members on the use of any benefit obtained from the forest reserve. There is low pressure in forest reserve that has led to a decrease in illegal activities such as hunting and timber cutting” (Respondent, Mlimba District, 17/07/2023).

The findings demonstrated influential of ritual activities noted by respondents, with majority acknowledging their role. This viewpoint corresponds with the qualitative insights from the FGDs that unveiled a nexus between ritual practices, local knowledge, and community engagement in JFM. Notably, the findings underscore that ritual activities transcend cultural norms and act as forest protection guardians, resonating with the argument made in literature by Pandey *et al.* (2018) and Elias *et al.* (2020). Additionally, the study aligns with prior research by recognizing the invaluable role of local knowledge, showcased through the preservation of sacred spaces within the forest, protected by supernatural forces, as noted by Mishra *et al.* (2013). Additionally, the quantitative data shows high recognition of traditional healers, like broader literature highlighting their importance in resource management (Francis *et al.*, 2015; Evardone *et al.*, 2021). However, the majority's denial of ritual activities' role in JFM could be influenced by accessible health facilities and modernized places of worship in the study area, reducing demand for traditional services. In sum, the findings enrich the discourse on forest conservation and stewardship.

Norms that Play Roles in Community Participation in JFM within USNFR

In *Table 6* pertaining to norms influencing community participation in JFM, the majority

(64.5%) of respondents were not aware of the normative activities. This could be attributed to limited communication regarding the norms. Among those who are aware, the most prevalent norms include the requirement of permits for forest entry (58.2%) and the prohibition of axe and machetes in the forest (35.5%). These regulations are likely in place to prevent unauthorized activities and ensure sustainable resource use. Interestingly, despite their comparatively low frequency, norms like singing songs for conservation (1.8%) and ritual activities (7.3%) seem to carry some weight. Additionally, the influence of these norms is reflected in their level of impact, with a significant majority (80.0%) of respondents were considering them highly influential. This suggests that even a few well-established norms can exert considerable influence over community engagement in JFM, emphasizing the power of adherence to regulations for effective forest management.

Through a FGD with VNRC members, the study delved into the importance of norms in shaping community engagement in JFM within the USNFR. The VNRC members emphasized specific norms that had a substantial impact on community participation in JFM, aligning with the quantitative data from *Table 6*. These norms included restrictions on carrying sharp objects like axes and machetes into the forest, the requirement of permits for forest entry, the respect for ritual areas, the promotion of conservation through songs, and the necessity of permits for collecting medicinal plants. The findings, in agreement with the quantitative data, collectively underscored the critical role of these norms in influencing responsible forest practices and nurturing a shared commitment to sustainable forest management. The respondent reported that:

“The significance of traditional norms includes the necessity of obtaining permits for forest entry, showing reverence for ritual areas, and obtaining permits for the collection of NTFPs like herbs and firewood” (Respondent, Mlimba District, 17/07/2023).

Table 6: Norms that play roles in community participation in JFM

Variable		Frequency	Percent (%)
Respondents' awareness of norms activities	Yes	55	35.5
	No	100	64.5
	Total	155	100
Type of norms that influences community participation in JFM	Axe and machetes are not allowed in the forest	4	7.3
	No entry into the forest without a permit	32	58.2
	Ritual activities	12	21.8
	Singing songs to promote conservation	1	1.8
	Not allowed to collect medicine without a permit	6	10.9
Total		55	100
The level of influence of norms	Highly influential	44	80.0
	Not influential	3	5.5
	Somewhat influential	8	14.5
	Total	55	100.0

Source: Field data (2023)

The results showcase a divergence in respondents' perspectives, with some recognizing the influence of norms and others not, this echoes the complexity often associated with normative factors revealed in community-based natural resource management by Biswas and Rai (2021). Earlier studies in the field have stressed the significance of norms and values in shaping collective action, with norms related to resource utilization and management being pivotal (Ghate *et al.*, 2013). Nevertheless, this study also underscores the variability in norm perception and awareness among respondents, a common feature in such contexts influenced by local dynamics and historical factors. Furthermore, the finding that even a limited number of well-established norms can wield substantial influence aligns with the notion that norm effectiveness is contingent on legitimacy and enforcement mechanisms (Ghate *et al.*, 2013). The testimony of a respondent reinforces the significance of local norms in forest entry permits, reverence for ritual sites, and obtaining permits for medicinal plant collection.

This elaborate interplay of norms aligns with literature highlighting their role in promoting collective action, collaboration, and community well-being within the framework of JFM (Beyene *et al.*, 2018; Biswas and Rai, 2021). Such norms serve as foundational pillars, encouraging sustainable forest protection.

Power Dynamics and Social Hierarchies in Community Participation in JFM within USNFR

Table 7 shows the results of power dynamics such as elders' influence as 71.0% respondents comment that presence of power dynamics and social hierarchies highly influences the level of community participation in JFM within USNFR, 16.8% somewhat influential while 12.2% not influential. This implies that majority of respondents perceived that the presence of power dynamics and social hierarchies highly influences the level of community participation in JFM within USNFR.

Table 7: Power Dynamics Influence

Power Dynamics Influence	Frequency	Percent (%)
Highly influential	110	71.0
Not influential	19	12.2
Somewhat influential	26	16.8
Total	155	100.0

Source: Field data (2023)

Cultural dynamics such as elders' influence and traditional rituals and storytelling involved interplay between power dynamics, social hierarchies, and community participation in JFM, as illuminated by insights gathered from FGDs with VNRC members. The cultural influence was the compelling influence wielded by community elders famously termed “The Elders' Influence”. These revered figures, recognized as custodians of tradition and wisdom, emerged as pivotal influencers in driving community engagement in JFM. Through a diverse array of strategies, including poignant storytelling sessions and symbolic family rituals performed at both village and forest grave sites, elders strategically nurtured a profound sense of accountability and dedication to forest preservation. Their elevated status within the community granted them the authority to not only foster a profound connection to heritage and legacy but also to disseminate critical lessons in law enforcement and conservation education. This venerable influence manifested through enduring traditions and rituals that highlighted the intertwined bond between the community and the forests, emphasizing their shared stewardship and inescapable obligation to safeguard these vital resources.

During one of the interviews, it was noted that:

“The power dynamics including community elders have a high impact encouraging the community participation in JFM through education and traditional law enforcements that act as a guide to community members on the use of any benefit obtained from the forest reserve” (Respondent, Mlimba District, 17/07/2023).

The study findings align with Mishra *et al.* (2013) and Taherdoost (2016), emphasizing power dynamics and social hierarchies' impact on JFM participation. The analysis spotlighted community elders' role in propelling engagement, using education and traditional enforcement. Elders' influence fosters responsible resource management, shaping norms, and active JFM involvement. This interplay forms a robust foundation for conservation commitment. Elders'

pivotal role as cultural influencers leverages their authority for JFM promotion through methods like storytelling and rituals. Weaving conservation into traditions passes on ethics to the young.

CONCLUSIONS

The study findings revealed that, demographically, a majority of respondents were young, suggesting potential active involvement in JFM, while gender imbalance and educational levels hinted at societal and professional influences. Socially, a high level of JFM awareness was observed, mainly disseminated through community gatherings and Village General Assemblies, driving engagement in conservation efforts. Culturally, rituals and norms played significant roles, influencing forest protection and responsible resource use. The influence of community elders, leveraging tradition and authority, emerged as a critical factor shaping community participation in JFM, underlining the importance of cultural integration in conservation initiatives

Recommendations

Based on the study's findings, a comprehensive set of recommendations is put forth to optimize community involvement and ensure sustainable forest management in the context of the USNFR's JFM initiative. Firstly, preserving and strengthening the influential socio-cultural factors that drive community engagement in JFM is deemed critical. Secondly, tailored and diverse outreach and education programs should be introduced to highlight the benefits of JFM, targeting different demographic groups through workshops, local media, and community gatherings. Thirdly, it is imperative to implement gender-inclusive strategies that encourage active participation of women in forest conservation, integrating gender perspectives into JFM policies. Furthermore, integrating cultural practices, traditional rituals, and the wisdom of community elders into JFM activities while respecting their influence is highlighted as essential. A robust monitoring system, continuously gathering

community feedback and adapting strategies, is crucial for sustained community involvement and effective forest management. Lastly, further studies are recommended to comprehensively evaluate the outcomes of regular conservation training programs, focusing on their influence in enhancing community understanding and application of JFM principles.

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REFERENCES

- Berkes, F., Colding, J., & Folke, C. (Eds.). (2008). *Navigating social-ecological systems: building resilience for complexity and change*. Cambridge university press.
- Beyene, A. D., Sandewall, M., & Sterner, T. (2018). The role of collective action in forest management: Evidence from Ethiopian highlands. *Ecological Economics*, 147, 312-321.
- Biswas, S. K., & Rai, A. (2021). Joint forest management and community participation: A study in Indian perspective. *Indian JL & Just.*, 12, 33.
- Conceição, P. (2019). *Human development report. 2019: beyond income, beyond averages, beyond today: inequalities in human development in the 21st century*. New York, NY: United Nations Development Programme.
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approach*. Sage publications.
- Cumming, G. S., & Allen, C. R. (2017). Protected areas as social-ecological systems: perspectives from resilience and social-ecological systems theory. *Ecological Applications*, 27(6), 1709-1717. <https://doi.org/10.1002/eap.1585>
- Day, J., Dudley, N., Hockings, M., Holmes, G., Laffoley, D. D. A., Stolton, S., & Wells, S. M. (2012). *Guidelines for applying the IUCN protected area management categories to marine protected areas*. IUCN.
- de la Mora, G. D. L. M., Sánchez-Nupan, L. O., Castro-Torres, B., & Galicia, L. (2021). Sustainable Community Forest Management in Mexico: An Integrated Model of Three Socio-ecological Frameworks. *Environmental Management*, 68(6), 900-913.
- Elias, M., Grosse, A., & Campbell, N. (2020). Unpacking 'gender in joint forest management: Lessons from two Indian states. *Geoforum*, 111, 218-228. <https://doi.org/10.1016/j.geoforum.2019.09.018>
- Evardone, C. J. A., Dignadice, E. P., & Parco, E. G. (2021). Assessment on event management service competencies of selected event managers in Taguig city. *Asia Pacific International Events Management Journal*, 2(1), 46-54.
- Folke, C., Carpenter, S. R., Walker, B., Scheffer, M., Chapin, T., & Rockström, J. (2008). Resilience Thinking: Integrating Resilience, Adaptability and Transformability. *Ecology and Society*, 12(1), 26.
- Food and Agriculture Organization (FAO). (2020). *State of the World's Forests 2020*. FAO, Rome.
- Francis, H., Temu, G., & Hauli, E. (2015). Access to Joint Forest Management Resources: Challenges and Opportunities to Local

- Communities. A case of Udzungwa Forest Reserve. *International Journal of Humanities and Social Science Research*, 4(1), 17-24.
- Ghate, R., Ghate, S., & Ostrom, E. (2013). Cultural norms, cooperation, and communication: Taking experiments to the field in indigenous communities. *International Journal of the Commons*, 7(2).
- Holmes, G., & Brockington, D. (2012). Protected areas—What people say about wellbeing. Biodiversity conservation and poverty alleviation: *Exploring Evidence for a Link*, 160-172.
- Kidenya, E. A. (2015). *Community participation in natural resources management: a case of natural forest management in Manyoni district* (Doctoral dissertation, Mzumbe University).
- Kiwango, Y. A., Munishi, P. K., Shemdoe, R. S., & Zahabu, E. (2019). Assessment of the performance of joint forest management in Tanzania: A case study of Makao Forest Reserve. *Forest Policy and Economics*, 104, 27-35.
- Lokina, R. B. (2014). Forest reform in Tanzania: A review of policy and legislation. *African Journal of Economic Review*, 2(2), 125-149.
- Luswaga, H., & Nuppenau, E. A. (2020). Participatory forest management in West Usambara Tanzania: what is the community perception on success? *Sustainability*, 12(3), 921. <https://doi.org/10.3390/su12030921>
- Mishra, B. K., Rath, S., & Mohapatra, B. K. (2012). Joint forest management in India: An assessment of its success. *Journal of Environmental Management*, 112, 292-301.
- Mishra, R., Behera, B., and Singh, K. (2013). Traditional ecological knowledge of medicinal plants in community-based management of forests in Odisha, India. *Journal of Ethnobiology and Ethnomedicine*, 9(1), 50.
- Mpokigwa, M. K. (2010). *The role of communication, education and public awareness raising on community participation in forest management in Mufindi District, Tanzania* (Doctoral dissertation, Sokoine University of Agriculture (SUA)).
- Ostrom, E. (2009). A general framework for analyzing sustainability of social-ecological systems. *Science*, 325(5939), 419-422.
- Pandey, S. S., Bhatt, B. P., Chaudhary, R. P., and Rawat, B. S. (2018). Role of sacred groves in conservation of plant diversity and their potential for ecological restoration. *Environmental Science and Pollution Research*, 25(3), 2173-2182.
- Persha, L., & Meshack, C. (2016). A triple win. The impact of Tanzania's joint forest management programme on livelihoods, governance and forests. *International Initiative for Impact Evaluation (3ie)*. <https://doi.org/10.23846/R8710F>
- Phiri, M., Chirwa, P. W., Watts, S., & Syampungani, S. (2012). Local community perception of joint forest management and its implications for forest condition: the case of Dambwa Forest Reserve in southern Zambia. *Journal of Forest Science*, 74(1), 51-59.
- Saha, A. R., Muangirwa, G. C., & Tiwary, N. K. (2019). A review of the role of institutions in participatory forest management in Tanzania. *International Journal of Society Systems Science*, 11(4), 298-311.
- Taherdoost, H. (2016). Validity and reliability of the research instrument; how to test the validation of a questionnaire/survey in research. *Electronic Physician*, 8(3), 2515-2520. <https://doi.org/10.19082/2515>
- Tarimo, W., & Ringo, J. (2016). Contribution of Joint Forest Management in Improving Conservation and Local Livelihood in Rufiji District, Tanzania. *Sustainability in Environment*, 1(2), 183-199.

Togolai, P. (2015). *Factors influencing effectiveness of Joint Forest Management Approach in Conservation and Management of Forest Reserves: A Case of Kimboza Forest Reserve in Morogoro, Tanzania* (Doctoral dissertation, The University of Dodoma).

United Nations. (2015). Sustainable Development Goals. <https://sdgs.un.org/>

United Republic of Tanzania. (2016). Uzungwa Scarp Nature Forest Reserve Management Plan 2016-2021. Ministry of Natural Resources and Tourism. <https://www.tfs.go.tz/images/documents/USNFRMP16-21.pdf>

World Bank. (2018). Joint Forest Management: An Introduction. <https://www.worldbank.org/en/topic/forests/brief/joint-forest-management>

Zande, R., & Mzuza, M. K. (2022). An investigation of the factors influencing community participation in forest management: A case of Balaka District, Malawi. *Journal of Geoscience and Environment Protection*, 10(3), 84-95.