



Original Article

## Evaluating the Operational Performance of Community-Based Tourism Enterprises and their contribution to community Conservation outcomes around Bwindi Impenetrable National Park

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Although Community Based Tourism Enterprises (CBTEs) significantly support conservation and sustainable livelihoods around Bwindi Impenetrable National Park, over 30 years they have undergone major changes in management, population, market demand and tourist numbers, whose effect on the performance of CBTEs remains unevaluated. There is a danger of over-reliance of communities on CBTEs, which creates a syndrome of complacency in communities to only look at biodiversity as their only source of livelihood, hindering their innovation in terms of income generation. This may lead to communities relying on the park resource as the only source of innovation for income or survival, putting a threat to the intended conservation outcomes. This study evaluated the performance of CBTEs operating within the four sectors of Bwindi Impenetrable National Park (BINP), Buhoma, Ruhija, Rushaga, and Nkuringo, to determine the extent to which they have lived up to their mandate of supporting livelihoods and enhancing conservation outcomes. Data were collected through questionnaire surveys with CBTE registered members, CBTE employees, Managers; in-depth interviews with UWA officials, Ministry of Tourism officials, local government officials, as well as NGO representatives and Focus Group Discussions (FGDs) with CBTE participants ranging from 6 to 12 participants. Community-Based Tourism Enterprises (CBTEs) around BINP exemplify a sustainable development model that integrates livelihood improvement, social cohesion, and conservation promotion. The findings show a significant relationship between CBTE performance and conservation outcomes like providing socio-economic and environmental benefits, which strengthen local support for conservation, supporting the community's drive to protect natural resources. To enhance their impact, strategic interventions are needed to increase the number of community-owned accommodation-based enterprises, capacity building to improve service quality, strengthening collaborations between CBTEs, tour operators and NGOs for value chain connections to increase tourist flow, leveraging digital marketing to increase visibility of CBTEs for better outcomes.

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## INTRODUCTION

Community-Based Natural Resource Management (CBNRM) is an inclusive approach to managing natural resources that promotes long-term sustainability by actively engaging local communities and resource users in the decision-making process (Black & Cobbinah, 2017). To advance this inclusive management approach, CBTEs have been established with support from UWA, NGOs like the African Wildlife Foundation, and private partners (Blomley et al., 2010; Twinamatsiko et al., 2014; Spenceley & Ahebwa, 2021) to reduce community dependence on forest resources by promoting alternative livelihood support to contribute to resource conservation outcomes (Ahebwa, 2012; Muhumuza & Balkwill, 2013; Boshoven et al., 2022). Community-based tourism enterprises are sustainable enterprises owned by the local community, wherein the local communities are actively involved in their establishment and management (Manyara & Jones, 2007b). The establishment of these enterprises is primarily based on their capacity to enhance local community support for the conservation effort (Ahebwa, 2012). They have a focus on poverty alleviation, enhancing employment and income generation for the poor through tourism facilities and providing an entry point for capacity building

programs of raising awareness about resource access and conservation while minding social and gender inclusion (Manyara & Jones, 2007b; Spenceley & Ahebwa, 2021; Boshoven et al., 2022). CBTEs thus emerged as a key mechanism for promoting community participation in tourism while advancing conservation objectives (Manyara & Jones, 2007a; Manyara & Jones, 2007b). The community-based tourism approach has been implemented across Africa for the past 25 years (Jones & Erdman, 2013). Reports from countries like Botswana, Malawi, Mozambique, Zambia and Zimbabwe indicate positive results (Stone & Stone, 2011; Mbaiwa & Kolawole, 2013; Runyowa, 2017). In East Africa, CBTEs were started in Kenya to improve livelihoods while conserving biodiversity (Manyara & Jones, 2007b; Nthiga et al., 2015), and they were instrumental in changing the attitudes of local people towards conservation (Kiss, 2004; Makindi, 2010; Ochieng, 2019). In Bwindi Impenetrable National Park, the establishment of CBTEs is rooted in a history of conflict and adaptation. Following the park's gazettement in 1991, many local residents, particularly the Batwa, lost access to land and forest resources, leading to hostility toward conservation initiatives, including acts such as arson, refusal to cooperate with Uganda Wildlife Authority (UWA) staff, and even the killing of gorillas

(Byaruhanga et al., 2012; Ahebwa, 2012). According to Uganda Wildlife Authority and District Community reports, over 50 CBTEs exist in Bwindi Impenetrable Forest National Park, the highest in the country (UWA, 2023).

CBTEs are deemed important in reducing conservation threats, but this has not worked well in BINP since wildlife threats have persisted, and biodiversity loss continues to happen with many flora and fauna species being threatened with extinction (IUCN, 2020). The conservation of gorillas is threatened by habitat loss, poaching, human-wildlife conflicts, and illegal resource extraction (Exclusive Africa Safaris, 2021; UWA, 2022). Recent initiatives, such as Uganda Wildlife Authority's disbursement of UGX 2.19 billion in revenue-sharing funds, have strengthened local engagement in conservation through infrastructure development and community projects like CBTEs (UWA, 2025). The disbursed revenues support CBTEs at Bwindi indirectly by providing financial resources that communities can apply to tourism-related ventures and projects (UWA, 2022). CBTEs have also enhanced conservation awareness and park-community relations by providing employment opportunities and direct tourism benefits, which foster positive attitudes towards wildlife protection (Ajambo, 2025).

The performance of CBTEs can be measured using indicators such as social-cultural, economic, political, ecological and technological dimensions (Ngo & Creutz, 2022). Successful CBTEs develop social relationships and increase community pride, engage in tourism activities, increase the number of visitors, jobs created, and businesses established (Mbaiwa & Kolawole, 2013; Manyara & Jones, 2007b). For enhanced performance of CBTEs, engagement with the private sector, including tour operators, travel agents and hoteliers, is key while working in collaboration with Protected area management authorities (Stone & Stone, 2011a; Kolawole & Mbaiwa, 2013). Community awareness, education, and sensitisation play a key role in ensuring the long-term sustainability of CBTEs (Asker et al., 2010).

More so, the demographic characteristics of CBTE participants, such as age, gender, marital status, and education level, can potentially influence the relationship between community engagement and firm performance (Stone & Stone, 2011b). Enterprises should contribute to positive attitude change to support community conservation efforts of safeguarding the habitat and strengthening biodiversity (Ahebwa, 2012; Baker & Brinckerhoff, 2015). These indicators help to evaluate the impact of CBTEs and identify areas of concern and potential threats to their long-term sustainability. Worth noting is that since the inception of CBTEs in Bwindi, societal demographics in terms of human population and its demands have changed (Tumusiime et al., 2018). The demographic changes led to a shift in the tastes and preferences of tourists, which necessitates an urgent solution if CBTEs are to survive in the market (Hanani et al., 2021; Spenceley & Ahebwa, 2021; Stone et al., 2021; Mensah & Afenyo, 2022).

Despite their recognised potential, the operational performance of CBTEs around BINP has not been systematically assessed over the past three decades, particularly in the context of evolving demographic dynamics, economic conditions, and technological advancements. Existing literature highlights governance structures, benefit-sharing mechanisms, levels of community participation, and external institutional support as key determinants influencing CBTE success or failure (Namara, 2006; Blomley et al., 2010; Ahebwa et al., 2012; Byaruhanga et al., 2012; Twinamatsiko & Franks, 2017). However, there remains limited empirical evidence on how effectively these enterprises currently fulfil their intended objectives and the extent to which their operations contribute to measurable conservation outcomes under current park management arrangements.

This study examines the current performance of CBTEs in the four sectors of BINP and evaluates their influence on community conservation outcomes. By assessing operational effectiveness alongside conservation impacts, the research provides insights into how CBTEs operate within the park's complex socio-ecological setting. The

findings inform CBTE's policy review, guide future interventions, and contribute to the broader discourse on sustainable tourism and community-based conservation in Uganda's tropical rain forest conservation areas and similar biodiversity-rich regions.

## MATERIALS AND METHODS

### Study Area

Bwindi Impenetrable National Park is located in the South-Western part of Uganda, specifically within the Kigezi highlands (Figure 1). It is located along the border with the Democratic Republic of Congo, and lies approximately between 1°00'–1°20' South and 29°35'–29°50' East. In decimal degrees, the park is centred around 1.08° S latitude and 29.66° E longitude. These coordinates place Bwindi within the Albertine Rift, a mountainous and biodiverse region of East Africa. Its geographical boundaries encompass Kanungu District to the North, Kisoro District to the South, and Rubanda District to the East. Covering an estimated area of 331 square kilometres (33,092 ha), Bwindi is characterised by dense forests spread across undulating terrain, consisting of both montane and lowland forest ecosystems (UWA, 2023). Positioned at a distance of roughly 540 km from Kampala, the capital city of Uganda, Bwindi overlooks the western side of the grand East African rift valley, which acts as a natural boundary with the Democratic Republic of Congo in the West. Bwindi exhibits remarkable diversity in terms of biodiversity, showcasing varied landscapes and intricate ecological systems (UWA, 2021b). BINP stands as the most abundant conservation area in Uganda, possessing a considerable wealth of ecosystem resources and exceptional biodiversity (Martin et al., 2008).

The area possesses a diverse collection of fauna, 120 species of mammals, 348 species of birds, 220 species of butterflies, 27 species of frogs, chameleons, geckos, and various endangered species. The mountain gorillas are a significant

presence within this area, with a population of 459 individuals, accounting for 51% of the world's remaining mountain gorilla population. BINP was designated as a World Heritage Site by the United Nations Educational, Scientific and Cultural Organization (UNESCO) in 2017.

BINP is surrounded by the most densely populated rural communities, with between 160 and 320 people per square kilometre (BINP, 2024). The communities around Bwindi are the poorest, the Bakiga, Bafumbira and Banyarwanda ethnic groups, who rely largely on small-scale agriculture to survive. Alongside them are about 50 to 100 Batwa families, who became landless after being evicted from the forest in 1964 and for generations, the Batwa had depended entirely on forest resources for food, shelter and medicine. These communities depend entirely on subsistence farming as their main source of income, which leaves them vulnerable to crop losses due to wild animal raids and lack of market (Muylaert et al., 2021). Research shows that about 42% of people in Bwindi live below the poverty line, meaning nearly half of the population struggles to meet basic needs (UWA, 2024).

The study focused on CBTEs in the communities bordering the four gorilla trekking sectors of Buhoma, Ruhija, Rushaga and Nkuringo. Bwindi Impenetrable National Park is an ideal case study due to its global biodiversity significance; it hosts nearly half of the world's mountain gorillas, which attract international conservation and ecotourism attention (UNESCO, 2023). Surrounded by densely populated rural communities that historically relied on forest resources, the park has developed CBTEs to mediate the balance between local livelihoods and conservation (Tumusiime & Vedeld, 2012). With a long history of CBTE initiatives, including cultural groups, craft associations, homestays, and revenue-sharing schemes—Bwindi provides a rich empirical context to assess the successes, challenges, and lessons of community-based conservation and tourism over time (UWA, 2023).



numbers, FGD and interview participants were purposively selected based on their expertise, leadership roles, or involvement in CBTE operations. Secondary data, including CBTE records, financial statements, and conservation reports, were reviewed to complement primary data (UWA, 2022).

The study focused mainly on two key themes: First, socio-economic, customer service and environmental performance of CBTEs, including income generation, asset growth, skill development, decision-making, partnerships, repeat visits, customer base, sustainable resource use, and conservation awareness. Second, the influence of CBTEs on community conservation outcomes, such as improved wildlife protection, sustainable natural resources management, and enhanced conservation education.

Quantitative data from questionnaires were analysed using SPSS version 25, generating descriptive and inferential statistics. Qualitative data (perceptions, experiences and narratives) were processed, and thematic analysis was conducted to identify key patterns and categories that complemented the quantitative results.

## RESULTS AND DISCUSSION

### Demographic Characteristics of Respondents

The demographic characteristics of the respondents revealed several key insights into the profile of individuals involved in the study around Bwindi Impenetrable National Park. In terms of gender, more than half of the respondents were female, accounting for 53.9% (n=152), while males comprised 46.1% (n=130). Of the total respondents, 45 were owners and managers of the enterprises, constituting 16% of the total respondents, 32 (71.1%) being males and 13 (28.9%) females. Most of the owners and managers of CBTEs were male, aged 45 and above, and registered members of group associations were dominated by females and mostly youths (Table 1).

Among the conservation and empowerment enterprises category, leadership is largely male-

dominated, with 17 male leaders compared to only 3 females. In accommodation enterprises, 8 leaders were male while 4 were female. Art and craft enterprises, with 4 female leaders and 2 males, whereas tour guiding enterprises are led by 3 males and only 1 female. Overall, the findings indicate strong male dominance in leadership, particularly within conservation-based CBTEs such as drama groups, associations, porter groups, and problem animal management groups.

Male-dominated leadership enhances compliance with conservation regulations due to their social authority and established relationships with conservation institutions. This strengthens adherence to protected area rules and reduction in illegal resource use, contributing positively to conservation outcomes (Kahsay et al., 2023). However, male leadership dominance may marginalise women and youth from strategic conservation decisions, despite their significant involvement at operational and household levels. This can weaken community ownership of conservation initiatives and reduce the effectiveness of conservation interventions that rely on collective participation.

Females account for about 54% in this study, and the dominance of females in CBTEs would suggest strong potential for conservation outcomes since they play central roles in natural resource use, household decision-making and intergenerational knowledge transfer. High participation of women ensures conservation awareness, transfer of benefits leading to improved conservation compliance at the household level (Mwinnoure & Dzitse, 2024). Women are always central to household decision-making concerning resource use, for instance, firewood collection, water access and farming practices near protected areas. More so, women who participate in community lodges, crafts, drama groups, beekeeping and tailoring receive training on sustainable resource use, wildlife protection and this knowledge is conveyed to their families and wider community (Mahajan et al., 2021). This stimulates pro-conservation behaviours like reduced illegal resource harvest and improved waste management. In this study,

therefore, where female dominance is high, it is expected that there will be strong support for conservation, reducing pressure on Park resources.

Regarding marital status, a significant proportion of the respondents were married, making up 73.8%, 22.3% were single, and only 3.9% were widowed. The high proportion of married respondents suggests strong household needs and responsibilities because married individuals often have dependents and greater responsibility for household welfare (school fees, food security, healthcare). When a family is engaged in a craft or porter business, drama group, they earn some income to improve their welfare, and this motivates members to support activities that aim at sustaining tourism over time. This means that married CBTE members are more likely to support conservation practices that protect resources on which their welfare depends (Ochieng, 2023). They are less likely to engage in illegal or harmful activities like poaching, charcoal burning, and forest encroachment since tourism income helps to meet household needs, reducing pressure on natural resources (Chepkwony & Lyakurwa, 2025). According to Tumusiime and Vedeld (2012), married individuals seek stable long-term livelihoods, which encourages consistent participation in tourism and conservation initiatives. Worth noting is that if married household financial needs are high and incomes from CBTEs are low, pressure on natural resources may still occur. Conservation outcomes are possible only when income from CBTEs is sufficient to support household needs.

The age distribution showed that the largest age group was 30-39 years, representing 34.0% (n=96) of respondents. This was followed by those aged 20-29 years at 24.8% (n=70) and 40-49 years at 18.8% (n=53), 9.9% (n=28) were 60 years or older. A smaller proportion of respondents were aged 50-59 years (7.8%, n=20). This shows that CBTEs are composed mostly of middle-aged, older people who are mostly involved in associations. The predominance of middle-aged individuals among the CBTE members leads to the sustainability of

conservation outcomes. Youth involvement enhances the potential for long-term conservation stewardship, adoption of innovative conservation practices and openness to conservation messaging (Lelloltery & Puttileihalat, 2024).

In terms of education level, the respondents came from a wide range of educational backgrounds, with higher education being more common. Tertiary education formed the largest group (35.1%, n=99), primary (25.5%, n= 72) and secondary education (25.2%, n=71), while a small proportion had no formal education (14.2%, n=40). Younger respondents (20-29, 30-39) representing about 46.1% had completed tertiary or secondary education, while older respondents aged 50 and above were largely limited to primary education or had never attended school, showing limited access to education in earlier decades. The 20-29 age group formed the largest share of the sample (n =103), showed the highest levels of education (education and tertiary), and a similar pattern was observed among those aged 30-39 years, reflecting improved access to education.

The increased participation of educated youths in CBTEs strengthens innovation, environmental awareness and adaptive capacity, because educated youths better understand conservation regulations, biodiversity values and sustainability principles, which makes them comply with rules, hence reducing harmful practices (Gorbatov, 2024; Prasetyo et al., 2025). Literacy supports record-keeping, use of digital tools, reporting and communicating conservation messages to peers and community members. Youth education and skills development improve governance, enterprise performance and long-term biodiversity outcomes (UNEP, 2022).

Education levels vary across enterprise categories, reflecting the different skills and knowledge requirements of each enterprise type. Conservation and Empowerment enterprises are dominated by respondents with no formal education (n=24) and primary education (n=20), with few having tertiary education (n=7). This suggests that such CBTE categories (reformed poachers, bee keepers, drama groups, problem

management groups) are open to individuals irrespective of their education level since they rely on practical skills, lived experiences and indigenous knowledge. Accommodation enterprises show the highest concentration of educated respondents at tertiary (n=42) and Secondary (n=32) levels, reflecting the managerial, financial and regulatory demands of such enterprises, like record keeping and customer service skills. The art and craft category displayed a mixed education profile, while the tour guiding category was dominated by respondents with secondary (n=10) and tertiary education (n=13), with only (n=1) having no formal education. This reflects the professional nature of guiding that demands some level of literacy.

Dominance of uneducated participants in the conservation and empowerment categories shows that CBTEs are highly inclusive, providing opportunities for all individuals to participate and benefit from CBTEs, encouraging stewardship for natural resources. These individuals provide indigenous knowledge, which is integrated with formal education to improve conservation and

natural resource management. The presence of more highly educated individuals in accommodation-based CBTEs leads to efficient business performance, which enhances participant livelihoods, adhering to sustainable practices that support biodiversity conservation (Børresen et al., 2022). This aligns with studies showing that higher education and related skills in CBTEs increase their capacity to implement environmentally responsible practices that are critical for long-term conservation success.

Within the CBTEs, most owners and enterprise leaders were degree holders, whereas diploma and certificate holders occupied managerial and service positions. The presence of highly educated owners and leaders implies improved strategic planning, financial management and governance within CBTEs (Vattanajirapun et al., 2024). Educated leadership is more likely to understand conservation policies, biodiversity regulations and sustainable tourism principles, which enhances compliance with protected area guidelines, thereby strengthening the contribution of CBTEs to conservation outcomes (Børresen et al., 2022; Salat et al., 2025).

**Table 1: Demographic Characteristics of Respondents**

<b>Variable</b>	<b>Frequency (n=282)</b>	<b>Percent (%)</b>
<b><i>Gender</i></b>		
Male	130	46.1
Female	152	53.9
<b><i>Marital status</i></b>		
Married	208	73.8
Single	63	22.3
Widowed	11	3.9
<b><i>Age</i></b>		
18-19	9	3.2
20-29	70	24.8
30-39	96	34.0
40-49	53	18.8
50-59	26	9.2
60 and above	28	9.9
<b><i>Level of education</i></b>		
No formal education	40	14.2
Primary	72	25.5
Secondary	71	25.2
Tertiary/University	99	35.1

## Characterisation of CBTEs around Bwindi Impenetrable National Park

### *Spatial Distribution of CBTEs*

The total number of CBTEs surveyed was forty-five (45) enterprises, and they were categorised into different types as marked with various symbols and colours around the park (see figure 2). The conservation and Empowerment category-23, Accommodation-based-12, Art-craft-06 and Tour guiding-04. The CBTEs are fairly distributed around BINP, with representation in all sectors. Buhoma and Rushaga host a comparatively higher number of CBTEs, about 35.5% of the enterprises. The majority of CBTEs were in the category of Conservation-oriented (porters association, drama groups, problem animal management groups, cultural groups, reformed poachers' associations). These earn income through entertaining visitors, carrying tourist bags and controlling access to raw materials from the forest. Bwindi Porter's Associations have a collaboration with UWA and participate in carrying tourist bags or tourists who are weak and cannot walk for long distances. Through these activities, they earn income that facilitates their wellbeing. An interview with UWA staff revealed that there are also entertainment groups comprising men and women, these are reformed poachers or community members of the Batwa indigenous tribe who always converge at visitor centres every morning to entertain tourists before they set off for gorilla trekking. The groups receive tips and appreciation from the visitors in the form of sponsorship for their children or funding to run their community-based projects. Community Initiative for Biodiversity Conservation (CIBIC) is one of the groups that has benefited from this arrangement, and an interview with their leader confirmed that it was through entertaining tourists that they were able to pitch their project and receive support.

Figure 2 shows that CBTEs are mostly concentrated on Gorilla trekking points within the four sectors. CBTEs located near park entry points often benefit from visitor traffic, revenue

opportunities and direct engagement with tourists. Communities that gain tangible benefits from tourism (through selling goods and services) are more likely to view the park positively (Abukari & Benedict, 2020). Being close to park entry points means that community residents have more direct interaction with park staff, tourists and conservation organisations, which enhances conservation education and awareness (Katswera et al., 2022b). CBTEs near entry points are well-positioned to foster awareness of conservation priorities, which strengthens community understanding of wildlife regulations and protected area management, leading to stewardship and long-term ecological outcomes.

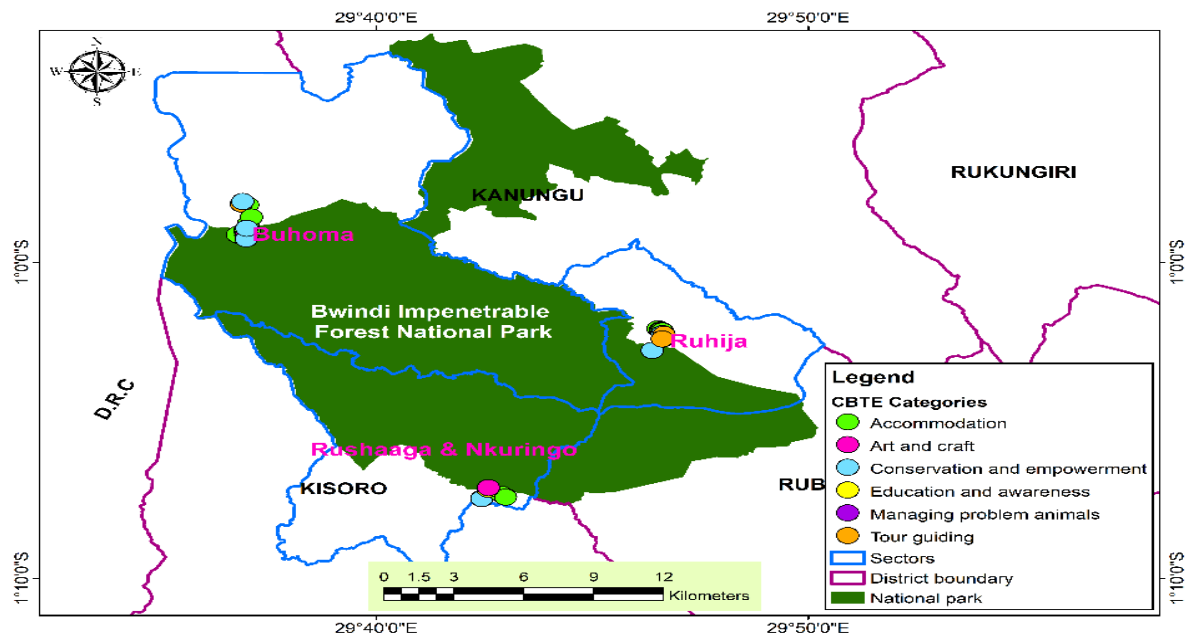
Accommodation enterprises (26.7%) were distributed throughout the surrounding areas of the park, evenly distributed in all sectors, with an average of 3 CBTEs per sector. The even distribution ensures that conservation incentives are spatially balanced, promoting fairness and engagement by community members, which encourages wider participation, fostering collective ownership of conservation goals, thus reducing local resistance to conservation interventions (Bello et al., 2018). Art and craft enterprises marked by pink circles (13.3%) were scattered around the park, with notable clusters near the southern parts, especially around the Rubuguri Town Council area. Art and craft enterprises were located at Park entry points, especially where gorilla trekking takes place, targeting tourists. The positioning is due to high tourist traffic and improved market access, which enables communities to derive direct economic benefits from tourism. When the communities receive income, jobs and improved livelihoods from tourism activities that depend on healthy ecosystems, they are more likely to protect natural resources, reduce poaching and participate in conservation initiatives (Jackson, 2025). The economic value of conservation becomes directly tied to the well-being of communities.

Tour guiding enterprises marked by blue circles registered the lowest number of CBTEs, with one enterprise per sector (8.9%). This is due to high licensing and regulatory requirements (UWA,

2021). Effective guides need detailed knowledge of biodiversity and conservation rules, which are lacking in community-based guides (Scheyvens & Scheyvens, 2025). The fluctuation in tourist arrivals also discourages widespread participation in guiding services (Boley et al., 2015). Interview data further reveal limited tourist engagement in Community-Based tourism activities around BINP, as one respondent explained, “even in the season, some tourists are not willing to engage in

community walks, cultural encounters, agro-tourism and bee-keeping tours...they do gorilla trekking only and leave” (Community guide, Buhoma). This suggests low marketability of CBTE products despite tourism presence. Knowledgeable community guides ensure responsible tourism and conservation, but low participation leads to low benefits which discourage conservation activities.

**Figure 2: Spatial Distribution of Community-Based Tourism Enterprises**



**Community-Based Enterprises’ Provenance and Temporal Occurrence**

The enterprise's provenance was assessed in terms of land ownership, source of funding, reasons why they started, trend of occurrence, as well as major activities that they carry out.

In terms of land ownership, 54.3% of CBTEs are established on land that is privately owned, 24.4% percent are set up on rented premises, while 22.8% exist on land that is communally owned or has been offered by the park management, for example, Buhoma community rest camp. Results indicate that accommodation enterprises that are not paying rent perform better than those renting. For instance, Buhoma Community Rest camp is doing well and has opened a sister lodge (Haven) after accumulating profits. The revenues from the

lodges are further invested in Buhoma community secondary and primary schools, gravity water flow to enhance community livelihoods (Buhoma-Mukono Community-Based Development Association (BMCD, 2025). When communities have secure land ownership, they have greater authority and incentive to manage natural resources sustainably, negotiate tourism benefit-sharing and enforce local conservation practices (Zielinski et al., 2020). Secure tenure strengthens community bargaining power with external tourism investors, enables long-term investment in conservation and tourism infrastructure and aligns economic benefits with ecological stewardship. Individual land ownership encourages quick innovation and decision-making for CBTEs, leading to increased benefits. Land owners can easily invest in eco-

lodges, homestays, or guided nature walks without delays associated with communal tenure systems. Quick innovation brings income, which is linked to resource protection. Landowners are more likely to restrict harmful activities on the environment. Quick decision-making allows land owners to comply with conservation regulations, adopt environmentally friendly practices and collaborate with conservation partners on conservation initiatives. In contrast, where communities lack secure land rights, they are often marginalised from decision-making, unable to negotiate favourable benefit-sharing agreements and may experience weaker conservation outcomes (Mpofu & Merwe, 2021). For the case of Bwindi, where 54.3% of CBTEs are operating on land that is individually owned, there is a likelihood for CBTE operators to invest in sustainable land uses that protect environmental values. They are also able to secure loans and invest more for better economic benefits which are tied to healthy ecosystems that support long-term conservation outcomes (Ssebagala, 2025).

About the source of funding for the CBTEs, 51.1% of the respondents confirmed that the starting capital was from their accumulated savings, 31.1% used member subscriptions, 11.1 used support from NGOs or well-wishers and 6.6% acquired loans from banks and microfinance institutions. For example, Clouds Mountain Lodge, an eco-lodge in Nkuringo, mobilised start-up capital resources from the community and got other support from the Integrated Gorilla Conservation Project (IGCP) and USAID (Nyakaana et al., 2019). Buhoma community Rest camp mobilised capital from community members, partners like UWA, IGCP, UNDP and conservation trusts (BMCT). Ride 4 a woman, a women's initiative that supports women through weaving and tailoring, the leader of this initiative confirmed that they used member subscriptions and seed grants from Community associations through UWA, IGCP, to start the enterprise. When CBTEs are financed primarily through community savings and member subscriptions, this reflects high local ownership and commitment. Internal financing encourages

members to prioritise long-term viability and stewardship of natural resources that sustain tourism, which is the case in Bwindi (Jackson, 2025; World Bank, 2018). This aligns with a finding that CBTEs owned by communities tend to strengthen local engagement, benefit retention and participatory decision making, all of which support conservation-friendly practices (Giampiccoli & Dlu, 2022). It was found out that some CBTEs rely on external funding from donors and other conservation organisations like UWA, AWF, and BMCT, while others get funding through revenue-sharing schemes. Increased funding for CBTE start-ups encourages the establishment of more CBTEs and increased participation, linked to economic benefits, which enhances community support in reducing harmful activities on the resource. Whereas NGO and donor support are valuable, they can be unstable, but internally generated funding and member subscriptions are more stable, enabling consistent reinvestment in conservation activities (Jackson, 2025).

The relatively low use of banks and microfinance loans suggests that CBTEs face limited access to formal financial markets due to a lack of collateral, high interest or poor financial literacy. Members of the Ruhija Community Development Association reported that their application for a loan was declined after failing to get collateral. Also, youth wood curvers in Nkwenda village, confessed that they cannot easily acquire a loan since their business is too small to act as security. This leads to underinvestment in capacity building, product development or conservation-linked infrastructure, which constrains income generation and conservation financing. Studies on CBT sustainability indicate that improved access to affordable credit and training enhances both livelihood and environmental outcomes (World Bank, 2018).

Among the reasons why CBTEs were set up or started are: to improve local incomes (40%), community support (35.5%) and contribute to community conservation (24.4%). According to UWA, the CBTEs were initiated mainly to link conservation goals with local community welfare.

The results show that about 75.5% confirm that CBTEs started to support communities in terms of increasing their incomes and encouraging them to contribute to community conservation outcomes. An interview with a local leader indicated that Buhoma Rest camp was started in 1993 to enable local people to benefit economically from gorilla tourism and address livelihood-conservation concerns. Buhoma-Mukono Community-Based Development Association (BMCDA) was purposefully established to stimulate local employment, increase income and reduce conflict between communities and conservation needs (FAO, 2006; Ahebwa et al., 2012; Manyisa et al., 2012). A study in Tanzania’s Burunge wildlife management area found that wildlife tourism contributes to local livelihoods through economic benefits and also supports wildlife conservation efforts because economic gains are tied to maintaining healthy wildlife populations (Mmbaga et al., 2024). Research on nature-based tourism in protected areas of Brazil, Nepal and Zambia shows that CBT brings economic development, raises local incomes and creates employment for households around protected areas (Gupta et al., 2023). When community livelihoods are improved, they are more willing to participate in activities that aim at protecting the National Park (Giampiccoli & Glassom, 2021).

Regarding period of existence, Accommodation enterprises are the oldest since 1997 when gorilla tourism was promoted in Bwindi (see Table 2). CBTEs have increased since 2006, especially in the accommodation category and conservation-

oriented, which registered a significant increase of about 86% between 2010 and 2018. There was a reduction in the number of CBTEs between 2012-2017 as well as 2018-2023, and the decline was attributed to market saturation, whereby higher-end accommodation options dominated actual tourism spending, reducing opportunities for Community -based enterprises. Also, communities lack capital and the needed skills to participate in investing and expanding accommodation enterprises (IIED, 2016; Ssebagala, 2025). Other external factors, like the Covid-19 pandemic, caused losses that reduced investors’ confidence and capacity to invest in new facilities (Nabukeera, 2022). Through interviews and observations, it was found that enterprises for foreign investors were the ones increasing compared to the locally owned CBTEs. The longevity of a CBTE strengthens conservation outcomes because enterprises that have existed for long enable deeper community engagement, institutional learning and sustained benefit flows that reinforce local incentives to protect biodiversity and habitats (Kumira et al., 2021). Long-existing CBTEs provide sustained incomes that in turn align local livelihoods with biodiversity protection (Katswera et al., 2022a; Gayo et al., 2025). As community tourism ventures mature, they can embed sustainable practices, solidify local conservation norms and generate ongoing revenues that make conservation a viable long-term livelihood strategy rather than a short-term project (Krittayaruangroj et al., 2023).

**Table 2: Community-Based Enterprises’ Provenance and Temporal Occurrence**

<b>Land ownership</b>	<b>Percentage</b>	<b>Source of funding</b>	<b>Percentage</b>
Communal	4(8.8%)	Individual savings	23(51.1%)
Private	24(54.3%)	Member subscriptions	14(31.1%)
Public	6(13.3%)	NGO support	5(11.1%)
Rented	11(24.4%)	Loans	3(6.6%)
<b>Reasons why CBTEs started</b>		<b>Major CBTE activities</b>	
Improve local incomes	18(40%)	-Accommodation provision	
Community conservation	11(24.4%)	-Drama and entertainment	

Land ownership	Percentage	Source of funding	Percentage
Skills development	16(35.5%)	-Assisting tourists (carry bags)	
		-Community awareness	
		-Skills development (curving, weaving, agriculture, beekeeping,	
		-Guiding services	
Year ranges	Conservation-oriented CBTEs	Accommodation	Art and Tour guiding
1994-1999	0	1	0
2000-2004	1	1	2
2006-2011	10	6	2
2012-2017	11	2	1
2018-2023	2	2	1
<b>Total</b>	<b>23</b>	<b>12</b>	<b>6</b>

### Performance of Community-Based Tourism Enterprises

#### *Social, Economic, and Environmental Performance of Community-Based Tourism Enterprises*

The performance of CBTEs was assessed across social, economic, and environmental dimensions, each measured using specific indicators reflecting the enterprises' contributions as perceived by respondents using a five-point Likert scale. From an economic perspective, respondents recognised that CBTEs provide significant benefits to their livelihoods. The highest-rated advantages were income generation (M = 4.38, SD = 0.53), job creation (M = 4.27, SD = 0.67), and improvements in infrastructure like roads, health facilities (M = 4.30, SD = 0.69). These results highlight the important role CBTEs play in boosting income, creating employment opportunities, and improving roads, water extension, schools and medical care. Economic benefits from CBTEs are directly linked to income, access to resources, meeting daily needs and the ability to cope with shocks and stresses (economic downturns, pandemics and environmental changes). In protected area contexts, communities participating in tourism activities report expanded income and diversified livelihoods, reducing reliance on unsustainable natural resource extraction and increasing tolerance for conservation regulations (Dominique et al., 2021;

Francis et al., 2025). For the case of Bwindi, economic benefits from CBTEs have improved local perceptions of conservation and motivated community members to support wildlife protection. According to a UWA game ranger, economic benefits have shifted community attitudes; "when there is a sick gorilla, every community member is concerned... poaching is rare, since communities are cooperating with the park management" (personal communication). The gorillas in Bwindi now represent economic value rather than threats.

Further, economic benefits have led to a decline in illegal activities through cooperation between local people and conservation authorities. Local people participate in fire control, patrolling and reporting illegal resource users to UWA for action. This shows a notable improvement in Community-park relations. A key informant highlighted the positive shift in attitudes and collaboration:

Over the years, we have seen a very big change in how communities around Bwindi relate to the park. Before, there was more tension, but now many people understand that conservation benefits them directly. Communities are cooperating with us in controlling bushfires, and in fact, a number of fire incidents have been reduced. Local people help us to quickly report illegal activities such as poaching or unauthorised entry into the park. We also work closely with

them on problem animal management, and they no longer retaliate. This cooperation has strengthened protection efforts, and conservation is becoming a shared responsibility. (UWA Community Conservation Ranger, BINP).

This response suggests that community-based conservation initiatives have enhanced local participation in conservation activities, reduced human-wildlife conflict and fostered a sense of shared responsibility in protecting the National park.

Theory and empirical evidence in sustainable tourism research argue that when local communities see tangible economic returns from tourism, they are more likely to value and actively support conservation efforts (Jackson, 2025). Community-based tourism is framed as a mechanism that links economic and ecological objectives by aligning the benefits of biodiversity with community well-being.

The greater variation in some responses (SD above 0.8) further indicates that economic benefits are distributed unevenly across the community, with some members being favoured compared to others. This was reported by a member of the association of reformed poachers in Buhoma, claiming that their association has never shared the money UWA claims to be giving to community enterprises. During interviews, there were grievances from members alleging that the funds released to support CBTEs don't reach the intended beneficiaries: "We always hear that UWA releases funds to support CBTEs, but our group has never benefited. A few enterprises access funds, and for us, we are left out" (CBTE member, BINP, personal communication, 2026). This pattern echoes other studies which warn that tourism benefits often concentrate among those who are already better positioned, such as individuals with more education or stronger social connections (Zielinski et al., 2020; Byaruhanga et al., 2012). Similar outcomes have been observed near Volcanoes National Park, where revenues from CBTEs were captured by a few active members with limited trickle-down effects (Dominique et al., 2021). This may limit

participation in community conservation activities since members confirmed that their motivation to participate in CBTEs, which negatively affects community support for conservation outcomes.

Despite the relatively good economic performance of CBTEs, some CBTEs are characterised by low profitability, with most of them operating on a small scale; they lack sufficient capital to invest in quality service provision, and as a result, facilities remain modest and are unable to attract high-end or luxury visitors. The researcher noted that this limited financial capacity also constrains entrepreneurship, innovation and market access. Low profitability and limited capital mean that CBTEs have fewer resources to invest in conservation initiatives. Small-scale, low-profit operations struggle to go beyond basic livelihood support to actively invest in environmental stewardship, which weakens the economic-ecological link that is central to community conservation models (Sarkar, 2025). This result mirrors the findings from South Africa, Northern Thailand, Queen Elizabeth and Kibale National Park (Katswera et al., 2019; Matiku et al., 2020; Lo & Janta, 2021). While results show that CBTEs are valued for economic contributions, their constrained financial performance and small-scale nature limit their potential to contribute to conservation outcomes.

Social performance indicators attained a higher average score across all dimensions, suggesting substantial benefits at the community level. The higher means for skills training ( $M = 4.40$ ,  $SD = 0.66$ ) and the preservation of local culture ( $M = 4.30$ ,  $SD = 0.60$ ) indicate that Community-Based Tourism Enterprises (CBTEs) have significantly strengthened community capacity and cultural identity. The metrics for social inclusion ( $M = 4.21$ ,  $SD = 0.64$ ) and collaboration between individuals or among communities ( $M = 4.16$ ,  $SD = 0.64$ ) show that CBTEs have effectively encouraged cooperative engagement with conservation agencies as well as community cohesiveness. Skills such as guiding, hospitality management, financial literacy and environmental awareness encourage locals to become

conservation advocates, for example, porters, reformed poachers, artisans and drama groups. When communities possess relevant skills and knowledge, they are more likely to comply with conservation regulations and participate in monitoring and stewardship activities, reducing illegal resource use (Ahebwa, 2012; Jackson, 2025). In the context of Bwindi, diverse groups are involved in CBTEs, for example, Nkuringo Youth guides, Ride 4 a woman, Bwindi Youth woodcarvers, Batwa development group, and Ruhija Artisans groups. When these participate in decision making, benefit sharing, and tourism operations, it builds trust, reduces inequity and fosters collective support for conservation objectives. Community meetings provide spaces for interaction, mutual support, and sharing of personal and family challenges, fostering a sense of unity and emotional relief among participants. Collective action and stakeholder cooperation act as drivers of sustainable outcomes (Mpofu & Merwe, 2021). This collective engagement has strengthened community bonds and enhanced social cohesion in that when conservation messages are passed, they are easily digested by members, hence support for community conservation.

The environmental performance of CBTEs was rated positively, with CBTE employees and community members acknowledging their strong efforts in sustainable resource use ( $M = 4.41$ ,  $SD = 0.58$ ), effective waste management ( $M = 4.26$ ,  $SD = 0.60$ ), and environmental education and awareness ( $M = 4.25$ ,  $SD = 0.67$ ). These results suggest that CBTEs are, to some extent, actively promoting environmentally responsible practices within their communities. Interviews with UWA staff and field observations indicated that CBTEs have partly played a role in promoting conservation awareness and sustainable practices. For instance, one staff member noted:

Over the past decade, our collaboration with community-based tourism enterprises has improved environmental stewardship. Through joint conservation activities, community education programs, and sustainable resource management practices, these enterprises have

helped reduce illegal activities, promoted tree planting and waste management. These efforts have been an important part of our strategy to protect resources in the park, although some gaps still exist (UWA staff, Buhoma sector).

Community respondents expressed that through education and sensitisation programs, they have developed a deeper understanding of the value of environmental protection. Many have adopted positive practices such as tree planting, garbage collection, recycling of plastics and energy-saving initiatives. For example, a water tank was built at Buhoma church using plastic bottles. The positive rating of CBTEs on environmental performance aligns well with current research showing that Community-based tourism initiatives can foster environmentally responsible resource use, waste management and conservation awareness (Apriliyanti & Randelli, 2020; Hung & Jan, 2019; Van Megen & Anthony, 2025; Watiema et al., 2024)

Community-Based Tourism encourages positive behaviours that reduce harmful activities like poaching and habitat destruction, promoting ecosystem protection (Ziegler et al., 2021). The high ratings for sustainable practices ( $4.41 \pm 0.58$ ) reflect a shift toward pro-conservation behaviours at the community level, which can reduce pressure on resources. A study in Queen Elizabeth reveals that CBT initiatives motivate locals to participate in collaborative resource management and conservation education, which builds local stewardship of natural habitats (Katswera et al., 2022b). The positive environmental performance shows that CBTEs are associated with actual conservation engagement and biodiversity protection in practice. CBTEs build conservation consciousness, which is a key precursor to sustained protective behaviours like participation in habitat restoration, anti-poaching reporting and sustainable livelihood choices (Ziegler et al., 2021; Jackson, 2025).

The social and environmental performance of CBTEs in Bwindi is generally commendable since they demonstrate active community participation, support to vulnerable groups and engagement in

tree planting, waste management and environmental awareness initiatives. However, the study reveals that tangible conservation outcomes are largely dependent upon the economic performance of enterprises, which is uncertain in Bwindi.

**Table 3: Performance Indicator Mean Scores of CBTEs for Conservation as Rated by Respondents**

<b>Performance Indicators</b>	<b>Mean±SD</b>
<b>Economic performance of CBTEs</b>	
I have generated revenue through tourism activities	4.38±0.53
I have earned through employment	4.27±0.67
I have expanded my business	3.99±0.89
With income, I have acquired assets	3.90±0.87
I have got a market for my local products	3.93±0.86
I have started a business	3.99±0.77
My entrepreneurship skills have been enhanced	3.54±1.06
Infrastructure has been developed	4.30±0.69
<b>Social Performance of CBTEs</b>	
The enterprise provides skills training	4.4±0.66
The enterprise promotes & preserves local culture	4.30±0.60
The enterprise promotes social inclusivity (marginalised groups, gender equality, cohesion)	4.21±0.64
The enterprise involves locals in planning & decision-making	3.98±0.78
The enterprise collaborates with partners (government, NGOs, tour operators)	4.16±0.64
<b>Environmental performance of CBTEs</b>	
Sustainable resource use	4.41±0.58
Measures to reduce carbon footprint	4.19±0.72
Educates & creates conservation awareness	4.25±0.67
Effective waste-management system	4.26±0.6
Applies energy-efficiency measures	4.1±0.71
Involves locals in tree planting & reforestation	3.97±0.64

Source: Interview data

### ***Comparing Performance across Sectors and CBTE Categories***

Accommodation enterprises stand out as the strongest performers economically ( $M = 3.60$ ) and in customer service ( $M = 4.33$ ,  $p < 0.001$  (Table 3). This is because accommodation facilities interact directly with visitors, especially international tourists, and are positioned at the centre of the tourism experience. They generate income not only from room sales but also from food services, guided activities, and complementary products. Their daily contact with guests also gives them more opportunities to respond to feedback and improve service quality. The accommodation enterprises with good performance are those located in the Buhoma sector. The sector hosts 9 of the 23 accommodation CBTEs, which is about 39.1% of

all accommodation enterprises. Buhoma Community Rest camp is an example of CBTEs that are doing well, and according to the manager, the enterprise accumulated revenue, which was used to start another enterprise nearby called Buhoma Community Haven Lodge in 2014. Bwindi guest house was established in 2010, originally built to house volunteers at Bwindi community hospital, but now provides accommodation to other guests who visit Bwindi. The revenue generated supports Bwindi community hospital, which caters for the well-being of communities in the Buhoma sector. Ride 4 a Woman is a conservation-oriented enterprise that was established in 2009, and empowers over 300 women through skills like tailoring, weaving, bike rentals and other tourism activities. It also provides accommodation services to supplement the income from weaving and tailoring. These

enterprises act as community hubs that help to reduce reliance on subsistence farming and support conservation efforts.

The good economic performance of accommodation-based CBTEs implies that tourism can generate tangible livelihood benefits that strengthen local support for conservation. When community lodges and homestays are profitable and receive positive visitor satisfaction, they provide employment, generate revenue for community projects, showing the direct economic value of conserving wildlife (Mmbaga et al., 2024). This acts as an incentive underpinning community conservation, encouraging households to support anti-poaching efforts, respect park boundaries, and participate in conservation programs (Lyakurwa & Chepkwony, 2025). Local participation in tourism value chains strengthens socio-economic benefits and improves conservation-compatible decision-making among rural communities (Chambwe & Saayman, 2024).

Enterprises in the category of art and craft, tour guiding and conservation-oriented appear to be struggling economically but strong in environmental performance ( $M = 4.34, p = 0.006$ ). Art and craft enterprises demonstrate the strongest environmental performance, with many relying on locally sourced materials and traditional knowledge systems that emphasise respect for nature. Their products often tell conservation stories, reinforce cultural identity, and indirectly promote environmental awareness among visitors. While interacting with members in the categories above, they confirmed that their businesses are not lucrative. The art and craft businesses are in poor conditions, for example, those in Nkwenda village near the Buhoma gate, Rushaga, Ruhija and Nkuringo sectors. Luxury tourists prefer to buy from more organised places, which are provided by most lodges, reducing the opportunity for community members to sell their crafts. The poor economic performance of tour guiding enterprises is attributed to intense competition, limited negotiating power with larger tour operators, and dependence on fluctuating visitor numbers. Also, interview data

revealed that most tourists do not participate in community tours; they trek gorillas and leave without demanding the services of local guides.

The National-level value chain data show that accommodation accounts for the largest share of tourist expenditure, while guiding and crafts receive smaller shares (Gosslings et al., 2020). A study in Makuleke, South Africa, found that community-run accommodation generated the most stable revenue streams and employment compared with community craft initiatives and small-scale guiding (Matiku et al. 2020). Other studies in Africa repeatedly note that accommodation enterprises are most likely to report higher economic performance (Jones et al., 2024). Micro-level Small and Medium Enterprises studies demonstrate that tourism-linked accommodation enterprises outperform many non-accommodation tourism enterprises on revenue and employment indicators (Deyshappriya, 2020). Strong economic and customer performance of accommodation enterprises suggests that CBTEs play a critical role in sustaining tourism demand and revenue flows, which is used to support household livelihoods and reduce reliance on environmentally destructive activities (Ferraro & Hanauer, 2014).

The weak economic performance of other CBTE categories suggests that conservation incentives tied to tourism livelihoods remain fragile with important implications for long-term conservation outcomes. Community-conservation models are premised on the idea that economic benefits from tourism motivate local support for biodiversity protection (Jackson, 2025). Employment, revenue sharing and enterprise development are intended to reduce illegal activities and strengthen community responsibility for conservation (IGCP, 2025). Conservation success in Bwindi relies heavily on linking improved livelihoods to wildlife protection; the economic underperformance of these enterprises implies that local stewardship of biodiversity remains uneven and vulnerable.

Considering performance across the sectors, Buhoma outcompetes other sectors, especially in economic performance for accommodation-based CBTEs. Buhoma’s superior economic and customer service performance may be attributed to its higher density of accommodation and service enterprises, more experienced service providers, and relatively well-developed tourism infrastructure (Blomley et al., 2010; Snyman & Spenceley, 2012; UWA, 2022). The sector benefits from its longer history of tourism engagement, more established market linkages, hosts the UWA headquarters and is the easiest sector for gorilla trekking. A report in Bwindi by FAO, 2006, shows that the Buhoma sector has a history of the first community initiatives in Uganda and benefits from longer tourism experience. More so, Namara (2015) in his study with IIED reported that Buhoma hosts a high share of accommodation facilities and is the oldest trekking hub with better infrastructure, more CBTEs and higher perceived tourist satisfaction. Studies in Africa, Asia and Latin report that CBT sites with stronger local enterprises where tourism history and market links perform better (Goodwin and Santilli, 2009; Ahebwa, 2013). Economic incentives are critical for aligning local interests with conservation goals. When people can earn more from CBTEs, there is a stronger incentive to protect the resource (Ahebwa et al., 2012; Ssebagala, 2025; Ziegler et al., 2021). Sectors with stronger economic performance may have communities that are more supportive of

conservation because their livelihoods depend more directly on protected wildlife.

The weak economic performance of CBTEs in Ruhija, Nkuringo and Rushaga may be attributed to structural constraints such as limited marketing exposure, weaker institutional support, and lower tourist flows. Field observations indicate that these sectors are located in hard-to-reach areas with poor connectivity and accessibility, which reduces visitor flows, hence affecting their economic performance (UWA, 2025). An interview with UWA staff at Rushaga confirmed that most tourists prefer to trek from the Buhoma sector since the terrain of the Nkuringo and Rushaga sectors are challenging, especially for the elderly tourists who are high spenders. Geography, therefore, plays an important role in shaping opportunity.

The sectoral performance differences imply that communities in a few sectors will receive conservation incentives, leading to uneven distribution, and the excluded sectors or households may continue relying on forest resources or perceive conservation restrictions as burdens. Conservation attitudes improve when tourism benefits are widespread and reliable, but remain fragile when benefits are concentrated among a small group (Snyman et al., 2023). Underperforming sectors weaken the social foundation of conservation by reducing conservation incentives for households.

**Table 4: CBTE Performance across Sectors and CBTE Categories**

Performance across sectors	Buhoma (N=104)	Nkuringo (N=48)	Ruhija (N=72)	Rushaga (N=58)	F (P value)
<b>Economic Performance</b>					
Mean (SD)	3.66 (0.464)	3.32 (0.504)	3.42 (0.319)	3.48 (0.435)	8.54 (<0.001***)
<b>Social Performance</b>					
Mean (SD)	4.25 (0.515)	4.17 (0.370)	4.27 (0.403)	4.11 (0.390)	1.748 (0.157)
<b>Customer Service</b>					
Mean (SD)	4.38 (0.535)	4.02 (0.352)	4.07 (0.397)	4.02 (0.316)	13.3 (<0.001***)
<b>Environmental</b>					

Performance across sectors	Buhoma (N=104)	Nkuringo (N=48)	Ruhijja (N=72)	Rushaga (N=58)	F (P value)
Mean (SD)	4.14 (0.534)	4.22 (0.332)	4.24 (0.343)	4.23 (0.400)	1.074 (0.361)
Performance across CBTE categories	Conservation-oriented (N=119)	Accommodation (N=95)	Art and Craft (N=50)	Tour guiding (N=18)	F (P value)
<b>Economic Performance</b>					
Mean (SD)	3.46 (0.481)	3.60 (0.410)	3.49 (0.431)	3.34 (0.434)	2.568 (0.0547)
<b>Social Performance</b>					
Mean (SD)	4.20 (0.429)	4.17 (0.456)	4.33 (0.458)	4.16 (0.373)	1.66 (0.176)
<b>Customer service Performance</b>					
Mean (SD)	4.03 (0.451)	4.33 (0.431)	4.23 (0.469)	4.02 (0.356)	8.96(<0.001**) —
<b>Env'TAL Performance</b>					
Mean (SD)	4.22 (0.425)	4.09 (0.414)	4.34 (0.464)	4.22 (0.370)	4.258(0.006**) —

**CBTEs’ Performance Contribution to Community Conservation Outcomes**

The contribution of CBTE performance on community conservation outcomes was determined using Multiple regression analysis, where CBTE performance components were entered in SPSS as predictors of conservation outcomes. The ANOVA results (see Table 5) indicate that the overall regression model was statistically significant (F = 20.394, p < 0.001), demonstrating that CBTE performance explains a significant portion of the variation in community conservation outcomes. The finding suggests that CBTE activities collectively contribute to conservation success in Bwindi, with social and environmental dimensions having stronger effects compared to economic and customer service. However, the residual variation shows that other institutional and environmental factors contribute to conservation outcomes other than CBTE performance.

The result shows that CBTEs are a conservation tool. Well-performing CBTEs can act as effective instruments for conservation (Giampiccoli &

Glassom, 2021). Through Key Informant interviews, it was found that CBTEs have made a great contribution to the conservation success in Bwindi. For example, a staff member from UWA stated, “From my experience, the enterprises have contributed to conservation, local people earn income through handicraft sales, employment in accommodation, get skills and other social benefits. I have observed reduced illegal activities and stronger community support for conservation through (UWA staff, BINP). When CBTEs deliver tangible benefits such as economic returns and social inclusion, they create incentives for communities to protect natural resources rather than exploit them. When CBTEs are well managed and integrated with local conservation goals, they are recognised as effective tools for promoting biodiversity conservation while supporting community development (Watiema et al., 2024).

The result aligns with the conservation incentive theory, which suggests that communities are more likely to engage in resource protection when conservation provides direct socio-economic benefits (Walpole & Goodwin, 2001). CBTEs are

a valid conservation strategy and strengthening their performance can enhance conservation outcomes, but their effectiveness depends on

complementary governance, social and environmental support systems.

**Table 5: CBTE Performance and Conservation Outcomes**

(ANOVA)Model	Source of Variation	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16.818	4	4.204	20.394	0.000
	Residual	57.108	277	0.206		
	Total	73.925	281			

**CONCLUSION AND RECOMMENDATIONS**

The spatial distribution of Community-based tourism Enterprises around BINP appears relatively fair, with conservation-oriented and accommodation enterprises particularly concentrated in Buhoma and Rushaga sectors. Examples of conservation-oriented CBTEs include: drama groups, porter associations, reformed poacher groups, bee-keeping initiatives and wildlife clubs, which play an important role in conservation education and community mobilisation. The overall number of CBTEs remains comparatively low and appears to be declining compared to enterprises owned by non-resident investors, a pattern largely attributed to the limited capital base among local residents.

Accommodation-based enterprises tend to perform relatively better than other categories economically, but operate on a small scale, offering standard services and lacking facilities that meet the expectations of luxury visitors, which constrains their revenue potential. Conservation-oriented, tour guiding, art and craft initiatives demonstrated strong social and environmental performance through raising conservation awareness and community participation, although their economic contribution remains modest due to fluctuating demand and weak market linkages. This economic fragility limits their overall contribution to strengthening conservation outcomes.

The findings suggest that CBTEs are most effective in promoting conservation when they directly enhance community livelihoods through employment, income generation and skills

development. Conservation becomes closely linked to community well-being, reinforcing local support for protected area management.

There is a need to increase the number of community-owned lodges that create employment opportunities and stimulate income generation through local supply chains, such as food production and craft sales. UWA support in the form of land access, seed capital and technical assistance can lead to the establishment of accommodation CBTEs in all sectors, thereby reducing spatial imbalances in benefit distribution. Collaboration with NGOs, private tour companies and hotels can help in strengthening market linkages for conservation-oriented enterprises, craft producers and tour guiding groups, enhancing their visibility in National and International tourism markets. In addition, conservation agencies should do continuous training and capacity building for accommodation-based CBTEs to improve service quality, customer service and enterprise sustainability. If implemented effectively, these interventions improve the economic viability of CBTEs, strengthen local livelihoods and deepen community incentives for conservation.

**Declaration of Conflict of Interest**

The authors declare no conflicts of interest.

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