

Assessing the Value of Community-Based Tourism Approach in Community Development in the Surrounding area of the Volcanoes National Park in Rwanda

Nzabandora Dominique^{1*}, Kabera Callixte², Uwayo Pacifique³

^{1,2}Department of Travel and Tourism Management, University of Tourism, Technology and Business Studies, Rwanda.

³Department of Environmental Economics and Natural Resources Management, Faculty of Environmental Studies, University of Lay Adventist of Kigali, Rwanda.

*Corresponding Author

Received:- 27 July 2021/ Revised:- 08 August 2021/ Accepted:- 14 August 2021/ Published: 31-08-2021

Copyright © 2021 International Journal of Environmental and Agriculture Research

This is an Open-Access article distributed under the terms of the Creative Commons Attribution

Non-Commercial License (<https://creativecommons.org/licenses/by-nc/4.0>) which permits unrestricted

Non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Abstract— *Community based-tourism (CBT) is both an integrated approach and a collaborative tool for socio-economic empowerment of communities through the development and marketing of natural and cultural community resources to add value to the experience of local and foreign visitors and simultaneously improve the level of the community. But there is lack of clear approaches to measure performances of CBTs, thus meaning that how they enhance socio-economic livelihoods of local communities and conserve protected areas is difficult to measure in both quantitative and qualitative terms. This study assessed the performance of Community Based Tourism on the socio-economic lives of local community around Volcanoes National Park, and it specifically 1) profiled and examined the performance of existing CBT ventures, 2) the factors affecting community-based tourism development around Volcanoes National Park and 3) the contribution of CBTs on social and economic lives of the local community. The methods used for data collection were sampling, key informant interviews, surveys, focus group discussions, observation and use of secondary data. Data was analysed using SPSS to generate descriptive information and further strata analysis was used. The study recommends that for Rwanda to achieve its goal of harnessing tourism for its vision 2050 the local communities around Volcanoes National Park should be empowered to embrace community-based tourism as an alternative to farming and fishing to improve their livelihood income.*

Keywords— *CBT Approach, and Community Development.*

I. INTRODUCTION

Community-Based Tourism (CBT) has been used to describe a broad range of different tourism models but usually refers to tourism that involves community participation and aims to generate benefits for local communities in the developing world by allowing tourists to visit these communities and learn about their culture and the local environment. Community participation in the tourism initiative is central to all the definitions, ranging from cooperative or individually owned and managed businesses to joint ventures between the community and the private sector (Zielinski et al., 2020). These ventures are characterized by high environmental consideration, increased control and involvement of the local residents, as well as significant benefits for the host community and coined the term community-based ecotourism (Hussin & Kunjuraman, 2014). This is used to describe any CBTs ventures that are characterized by high environmental and social considerations, increased control and involvement of the local residents, as well as significant benefits for the host community (Phuong et al., 2020).

Tourism Development Master Plan of 2010 noted that Rwanda has a growing community-based tourism sector providing visitors with an insight into how local Rwanda communities live and work. These are located mostly along the tourism routes and provide products and services such as home stays, village walks and interaction with village personalities (Safari, 2017). As described by Njenji (2020), these CBTs are managed and governed to pursue the economic and social goals of the communities in the country in a manner that yield sustainable individual and group benefits over the short- and long-term. However, the data on the economic activity of CBTs or indigenous entrepreneurs is still scarce (Gohori & van der Merwe, 2020). According to Mayaka et al., (2020), CBT was born as an alternative approach to the excesses of mainstream or mass tourism, such as repatriation of profits from developing economies by multinational companies and the negative impact on

destinations. It is consistent with alternative development and sustainable livelihood approaches, which focus on grassroots development and embrace participation, equity and empowerment ideas. Its interest resides in the fact that CBT projects are small or medium sized ventures that have the potential to generate a range of positive economic and social development impacts in rural areas, where other types of development may be inadequate (Pemayun & Maheswari, 2017).

Through local control of tourism businesses and activities, CBT is thought to contribute to cultural and environmental conservation and to the redistribution of economic benefits among the most vulnerable groups, such as indigenous communities. A range of studies about CBT initiatives have confirmed its potential benefits to communities, especially 'commercially grounded' initiatives (Kaur et al., 2016). In Rwanda, the government's policy framework prioritized Northern Province, which accommodates the Volcanoes National Park, a habitat of the rare endangered mountain gorillas as a great tourist destination where, Community Based Tourism (CBT) needs to be sustainably developed (Aboniyo & Mourad, 2017). A number of public and private sector investments have been encouraged by the Rwandan Government to provide tourist infrastructure and accommodation facilities. But, to engage the local communities in tourism in the province, SNV in the period of 2005-2012 initiated pro-poor tourism (PPT) projects in the country to encourage local participation and achieve local community economic diversification and alternative household income generation. Since these initiatives of CBT through PPT, the values to realizing socio-economic benefits and conserve wildlife have not been assessed in case of Volcanoes National Park in Rwanda. This creates a gap to understand whether CBT approach is effective or not (Njenji, 2020). Therefore, this study was conducted to fill this gap where, it assessed the value of community-based tourism approach in community development in the surrounding area of the Volcanoes National Park in Rwanda.

II. MATERIALS AND METHODS

2.1 Study Area Description

The study was carried out in Northern Province of Rwanda, Musanze District, precisely in both Kinigi and Nyange Sectors. The district is one of the four districts surrounding the Volcanoes National Park: Burera, Musanze, Rubavu and Nyabihu. According to the fourth Rwanda Population and Housing Census (PHC4) 2012, Northern Province had an estimated population of 1,726,370 residents representing 21.4% of the total country's population (Farmer et al., 2013). That population is predominantly female whose number represents 52.6% of the total population of the province. Gicumbi and Musanze, are the mostly populated districts with more than 360 thousand residents for each. Their populations represent 22.8 % and 21.4% of the total resident population of the Northern Province.

Kinigi and Nyange Sectors where the study was conducted, experience periodic temperature variations with the highest temperatures occurring in the dry season while the coldest occur in the rainy season. The average maximum temperature varies between 22-26°C while the minimum ranges between 10-15°C. The area has four main seasons: a short dry season occurring from January to March, a short rainy season from March to May, characterized by torrential rainfall, a long dry season from June to August and a long rainy season from September to December. The climate is typical tropical, characterized by high annual rainfall of up to 1, 500 mm per year.

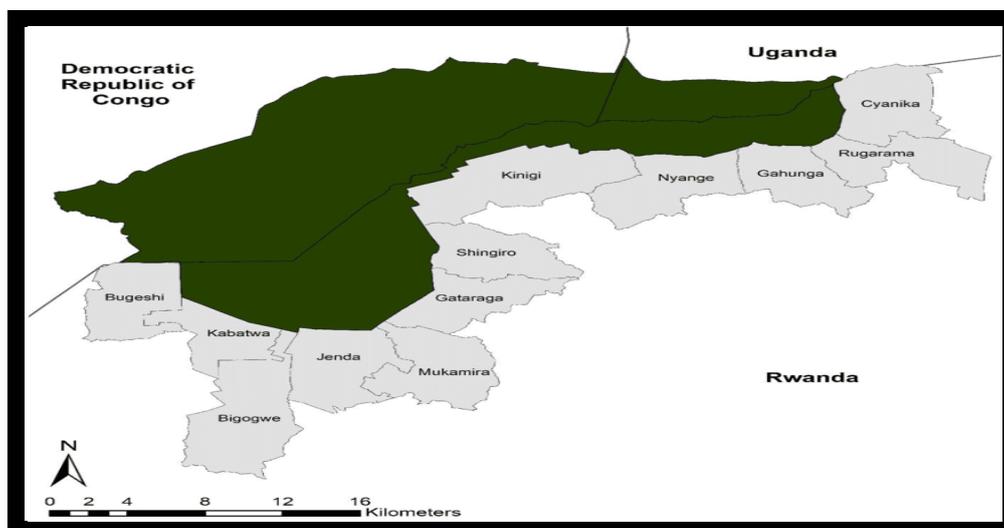


FIGURE 1: A map showing the different districts adjacent to VNP, Rwanda
Source: www.researchgate.net

2.2 Sampling Techniques and Data Collection

In this study, both purposive and random sampling techniques were used. Four CBT initiatives were purposively selected as case studies to profile structure of CBTs around VNP. Although, there were over 15 CBT ventures around VNP, the four initiatives which are the first to be started with technical and financial assistance from SNV and other external agencies and which have also grown to be large and renowned CBT venture examples around VNP area were chosen. Their deliberate selection aimed to extend existing studies on CBT approach in protected areas. The purpose was to collect random views on contributions of CBT approach to the community and household wellbeing. To determine sample size, Slovin formula was used.

$$n = \frac{N}{1+Ne^2} \quad (1)$$

Where: n = sample size (households that participate in CBT initiatives)

N = Total number of CBT members based on District CBO Register

e = margin of error

A sample size of 317 community respondents was selected from a study population of 54,687 residents (Kinigi 27,221 and Nyange 27,466). Cohort surveys were conducted to trace CBT venture group members who overtime shared the benefits to enhance livelihoods. The formula was applied to as: CBT venture Case 1 total members = 370: Case 2 total members = 300: Case 3 total members = 178 and Case 4 total members = 235. However, 10 CBT projects managers and 7 local leaders were deliberately included in the sample. Out of total sample size of 317, the actual respondents were 220 with 97 non-responses. Statistically response rate of 69.4% was considered significant for this study.

2.3 Data Analysis and presentation

The data collected on various aspects of the study (socio-economic or demographic variables of households, community tourism asset base and stakeholder views) were analysed using different methods. Resulting quantitative figures on demographic variables of households were entered into excel and transferred to the Statistical Package for Social Sciences (SPSS) for analysis. Descriptive information generated in as modes, means and standard deviations were further analysed using STRATA. To establish relationship between household variables and their ability to participate in CBTs Logit model was used. The model assumes nonlinear probability models with cumulative probability distribution function:

$$P = \frac{1}{1+e^{(-\beta X_i)}} \quad (2)$$

Where:

P - Probability that an individual participate in CBT

B - Coefficient of the covariate for every unit change in the covariate.

e - Exponential value.

Explanatory factor analysis (EFA) was run to identify critical factors that enabled growth of CBTs based on the existing asset base for tourism development.

III. RESULTS AND DISCUSSIONS

3.1 The main economic activities in Kinigi and Nyange Sectors

Based on the research results, excessive soils erosion and declining land size due to overpopulation and over farming on fragmented plots of land around the park boundary, limited formal employment opportunities and poor accessibility to the park undermined long term dependability of the community on current means of livelihoods. However, other alternative means of livelihood were provided by CBT ventures with assistance from SNV and other agencies. They encouraged recruitment of households and individuals as members of CBT ventures. Indigenous private or family investment in tourism sector were encouraged using collective CBT venture models like private small accommodation facilities, small restaurant and food establishments, tour guiding and porter services.

TABLE 1
COMMUNITY/HOUSEHOLD MAIN ECONOMIC ACTIVITIES AND THEIR PERSPECTIVE ON THEIR SUSTAINABILITY

Major economic activities	Community perspective on the status over long term prospects
Farming (Crop growing)	Excessive soil erosion and much more land taken up for crop growing.
Animal keeping	Disease outbreaks and shortage of grazing land.
Forestry	Illegal logging and excessive charcoal burning.
Commerce and trade	Increasing poverty due to declining productivity activities of fishing and farming leading to lowering household purchase power.
Formal employment	Limited employment opportunities due to limited growth around the park's major economic activities, civil service sector and rapid population growth (natural growth and high level of immigration).
Transport sector	Poor connection with other towns due to bad road infrastructure in the region and further transport sector development discouraged by declining economic opportunities around the park.

The reported encouragement was due to unique tourism resource base provided by the Volcanic Mountains, forests on the mountain slopes, wildlife and birdlife, as well as Rwandan cultural heritage attributes. The leaders of Musanze District informed that the district office had received applications for ecotourism projects by the private investors seeking concession for investment. The researcher also noted the growing accommodation and tourism development related activities, the way that the trend of tourism development offered the communities opportunities to invest in CBT ventures.

This perception based on the projected socio-economic benefits that could arise from CBTs to include sharing park entry fees, joint investment ventures with private sector, employment creation, improved household income, improved transport services and self-community social service provisioning like primary and secondary schools, health centres and safe water sources. It was noted that tourist expenditures on lodging, internal movement, food, guiding services and purchase of local crafts and souvenirs could offer tourism income to provide these socio-economic benefits. It was also observed that CBTs could play a major role as local collective entrepreneurs to provide opportunities for community-based ecotourism development to fill the gap of limited government or private sector investment interest in tourism sector around the park. Local community entrepreneurial gap would be crucial in developing and implementing productive investment opportunities offered by immense Mountain forest, Lakes, wildlife and birdlife potentials.

3.2 Resident Participation and its relationship to socio-economic determinants

Given the centrality of socio-economic determinants of the residents in influencing willingness to participate, Logit Model was used to establish the relationship between various socio-economic factors and willingness to participate (Table 2). The significances of coefficients provided the relationships explaining how socio-economic enable willingness to participate in CBTs by residents of Kinigi and Nyange sectors. These variables provide significant factors that influence willingness to participate. Land size (those with no land were reference category); Household Size ('1-3' people in the household was the reference category); Gender (Males were the reference category); Dwelling conditions (temporary was the reference category); Occupation (peasant farmers were the reference category); Education level attained (No education was the reference category); Age (15-29 category was the reference category); Residence Duration (was the period a house hold head had lived in the area); Income level (less than 50,000 RWF was the reference category; *** Significant at 10 percent level. The reference category is the category (in each explanatory variable) with which the comparisons are made. Results presented in Table 2 summarize the relationships between socio-economic factors and resident willingness to participate in CBT development. Socio-economic factors like gender, age (apart from group 45- 59), family size, dwelling and residence period generally had insignificant estimated coefficient and low marginal effect implying low probabilities of influencing and encouraging resident participation in CBT. Education, occupation, income and land size provided positive and statistically significant influences on participation in CBT venture formation, management and running. Particularly, education and income had shown increasing marginal effects of household participation. This means that the higher the education or income levels, the more residents around the park are willing to participate in CBT development. Income was the estimated monthly amount of money earned by a household from different economic activities including tourism activities.

TABLE 2
SOCIO-ECONOMIC VARIABLES INFLUENCING COMMUNITY WILLINGNESS TO PARTICIPATION

Variable	Explanatory variables	Coefficients	z-statistic	Marginal effects (r)
	Constant:	-1.900	-5.21	0.713
Gender	Female:	0.120	0.59	0.326
Age	30-44 years	-0.315	-1.03	0.505
	45 – 59 years	-1.199***	-2.70	0.510
	60+ years	0.037	0.11	0.639
Household size	4-6 people	-0.354	-1.09	0.390
	7-9 people	-0.383	-0.50	0.492
Land size	1 - 2 acres	0.861***	2.26	0.421
	3 -5 acres	1.822***	4.24	0.536
	6 - 8 acres	1.338	1.94	0.789
Income	50,000 – 100,000	2.196***	2.84	0.69
	100,001 – 150,000	1.823***	2.27	0.83
	150,001 – 200,000	2.626***	3.15	0.78
	200,001 – 250,000	2.314***	2.91	0.82
	Over 250,001+	3.376***	4.32	0.86
Education	Primary	1.201***	2.39	0.388
	Secondary	1.412***	2.67	0.473
	Tertiary	1.732***	1.95	0.836
Dwelling	Semi-Permanent	0.321	1.33	0.337
	Permanent	0.178	0.10	0.424
Occupation	Commercial fishing	2.012***	3.82	0.599
	Farming	-0.265	-0.27	0.973
	CBT members	2.764***	2.61	0.853
	Retail business	1.237***	2.03	0.685
	<i>Bodaboda</i> transportation	0.214	0.71	0.748
	Employed	1.561***	1.03	1.275
Residence	6 – 10 years	0.759	1.71	0.555
	11 – 15 years	0.865	1.68	0.499
	16 – 20 years	0.529	0.97	0.523
	21 – 25 years	0.885***	2.06	0.412
Log likelihood = -141.363		Pseudo R ² = 0.3521		
LR chi2(24)=191.81		Prob> chi2 = 0.000	Sample size =330	

The results indicate that those residents engaged in commercial farming, employed in tourism enterprises, tourism entrepreneurs, government officials or collective self-help CBT ventures participated in CBT development. However, tourism entrepreneurs, government officials or residents who formed collective self-help CBT ventures had a higher marginal effect (0.91) than others collectively at (0.642). This was found to be linked to those residents who understand how CBTs could be used as self-help approaches collectively by residents to achieve park and their development. In this regard, it was found out that CBT acted as a strategy of community development through park tourism development.

When asked about their involvement in CBT projects and/or programmes, participation in meetings was identified as a popular activity undertaken by local residents. 76.6% of total respondents having participated in CBT meetings. However, majority (80.2%) participated few times (only once or twice). About their roles in decision-making, a total of 52.4% noted their engagement in deciding for CBT plans, activity project initiation or diversification. When comparing men and women in decision-making, the findings revealed a higher percentage of men in decision-making (42.5% versus 12.8%). Pearson chi-square tests were also run to show any significant differences between men and women in decision making about CBT plans, programmes and activities. CBT planning, programme and activity plans showed the greatest difference between men and women, corresponding with traditional roles between men and women in making decisions, there was significant difference in these activities between the two groups. However, in issues of craft making women made their own decisions on what type (s) of crafts when to make and at what prices to sell.

This was done through the park community socio-economic analysis and willingness to participate. Assessment was also done of existing strength and opportunities offered by their livelihoods in order to approximate their willingness to undertake alternative livelihood strategies in CBT. The assessment of socio-economic factors focused on: general socio-economic features of the residents as proxy approximation of undertaking opportunities in CBT ventures; - relating socio-economic variables with willingness to participate; level of knowledge and organizational skills. Awareness, knowledge and organizational skills are the basis for successful participation and management of CBTs. Long term prospects of their current sources of livelihood were investigated by applying the “resident development influence matrix” with the target group through focus group discussion.

With reference to the community participation, incorporating local communities’ thoughts in tourism planning and development is a vital element of sustainable tourism. Notably, community participation is essential for tourism development, as tourism has a close relationship with the livelihood of the local community and the tourism destinations are communities with which local residents interact. This makes CBT as an important strategy to improve tourism development around Volcanoes National Park. Communities around parks’ understanding of tourism potential for development can motivate their participation which can also improve their livelihoods. However (Mak et al., 2017), cautioned understanding potential of tourism development needs examining the extent to which local residents are thoroughly informed and invited to join in the tourism initiative process. A number of tourism scholars have adopted various frameworks to understand the level of participation and power distribution within communities and to determine whether the frameworks can be applied to both developed and developing countries. But, these frameworks were not applied in this study, because the study interest was to evaluate CBT tourism development initiatives only and understand how much tourism had penetrated the Kinigi and Nyange sectors of Volcanoes National Park development. It examined the relationships in terms of how rural communities with low economic activity and low tourism development residents have expectations about the future tourism development. The study found out more favorable perceptions towards tourism development. Similarly, the findings from this study also indicated that residents are willing to participate in CBT because its development relates closely with the level of economic activity within the park. However, a study by Nugroho & Numata (2020), in Fiji noted that residents of communities’ dependent on tourism can clearly differentiate between its economic benefits and social costs.

3.3 Improvement of livelihoods and achieving conservation objectives

An assessment of CBT initiatives in Kinigi and Nyange sectors was done in order to provide a clear picture of how the four cases have played major roles in improving community/household livelihoods. This was done by means of Tourism Penetration Index (TPI) to relate venture development with livelihood improvement by understanding the degree of CBT venture development as alternative means of livelihoods. Its penetration as an alternative livelihood means relate directly with improvements of community/household wellbeing. The findings are guided by the questions: What are the CBT ventures existing in Kinigi and Nyange? What do they contribute to socio-economic lives and conservation? How has CBT approach in Kinigi and Nyange helped to enable tourism to penetrate the local economy in and around the Volcanoes National Park? These questions guide the findings about how CBT approach improves community livelihoods.

TABLE 3
TOURISM INVESTMENT IN KINIGI AND NYANGE AS A MEASURE OF TOURISM PENETRATION

Names	Ownership	Venture Type	Bed Capacity	Employment	Land occupied (in Acres)
Gorilla Guardian	Community	Cultural centre		43	10
SACOLA	Joint venture	Accommodation	45 Rooms	45	1
Volcano National Park	Government	National Park	162	90	12500
Buhanga Eco-Park	Government	Eco-Park		16	31
Nyange Community	Community	Cultural Village		25	40
Buhanga Sacred Forest	Government	Forest nature walks		24	8
Bulera and Ruhondo	Government	Canoeing on the twin Lakes		40	2800
Musanze Cave	Government	Cave visits			
Totals			162	238	15389
Percentage of private sector investment					0 %
Percentage of community group involvement and investment					28.6 %
Percentage of CBT initiatives					42%
Percentage of community members employed by external investors					0 %
Tourist Spending/annum					225.3Bn
Size of the Island (KM ²)					15389
Population (2014)					54687
Visitor arrivals					185000
Average stay					2.5

3.3.1 CBT ventures existing in Kinigi and Nyange Sectors

Different scenarios were used to categorize CBTs in Kinigi and Nyange sectors; thus individually owned community-based businesses, cooperatives, community associations, and concessions. The categorization was purely based on the elements of community-ownership or management. As it is shown by the data presented in Table 3 above, four main types of CBTs were identified and classified as:

- a. Tourism project in which community members are employed by outsiders.
- b. Tourism project that involves family ventures within the communities, based on community assets.
- c. Group initiatives that are involved in collective ventures to run either as cooperatives or community associations within the park communities based on the park natural and cultural heritage assets.
- d. Joint venture between a community or family and an outside business partner.

This categorization based on community ability to embrace individual or collective initiatives within the Kinigi and Nyange sectors. Table 3 summarizes the investment types by CBTs in Kinigi and Nyange sectors.

3.3.2 Contributions of CBT ventures to socio-economic lives and conservation

The contributions of CBT ventures in community development are vital to encourage participation and creating self-help initiatives in the local community economies for those living around national parks. The linkage between community assets, participation and benefits was determined by asking the following questions. How does CBT approach encourage community assets/capitals development in and around the park? What are the different ways in which tourism contributes to park communities' livelihoods in Kinigi and Nyange sectors? These questions were used in the study to assess the socio-economic benefits and CBT venture contributions to the local communities living in neighborhood with VNP. However, the ability of CBT approach to contribute to socio-economic lives of the communities was analyzed by how much tourism has penetrated in the socio-economic lives of the community as an alternative livelihood activity. These were determined by different agencies support by providing finances to supplement community or household livelihood strategies and by use of tourism penetration index (TPI).

3.3.3 Contributions of agencies to support CTB initiatives

Agencies support to CTB approaches was determined by different supports to community-based groups who are engaged in tourism. The findings noted various financial and technical supports provided to community-based groups. Table 4 shows the various contributions by different agencies in supplementing community-based initiatives around the park. As noted in the table, agencies' supports focused on supplementing community-based initiatives of commercial ventures like accommodation provisions, capacity-building and social service supports in form of school fees. However, the monetary contributions in these various support could not be got because the agencies regarded the information confidential.

TABLE 4
CONTRIBUTIONS OF AGENCIES TO SUPPORT CTB INITIATIVES

Agencies	Projects supported	Types of contributions
Rwanda Development Board	Revenue-sharing projects	Revenue-sharing fund of 10%
SNV	Financing community-based project under pro poor tourism initiatives	Funds to start community enterprises
SNV	Community capacity building as technical support	Training
International Gorilla Conservation Programme (IGCP) jointly with Flora & Fauna International (FFI)	Community capacity building	Training
IGCP	Community accommodation project support	Co-funding of SACOLA lodge jointly with a private investor
Africa Wildlife Foundation	Support to community-private joint ventures	Co-funding of SACOLA lodge jointly with IGCP and a private investor
Dian Fossey Fund	Building gorilla-community relationships for mutual co-existence	Paying school for vulnerable children, Amani yaJuu Artisan Sewing Project for women groups and the Kigali Public Library Project

3.3.4 Tourism Penetration Index in the Local Economy of Kinigi and Nyange sectors

As provided in Table 5 below, average per capita visitor spending was Rwf. 91,447.58 per total population in the Year 2014 and average visitor density is calculated at 0.0021 tourists per total population per 1000 residents. This implies that visitors represented 0.021 percent increase in most of the year round population of the park. This is critical in determining demand increase for resources and utilities. The current land use percentage occupied by tourism related investment is only 0.101 (about 10.1%) per total land size of the park implying tourism is still at infant stage of development. Tourism employment only represents an indicative figure of 0.11. The overall TPI score for the park is 0.457 combining five variables of spending, density, bed capacity and land use. Therefore, since the purpose of this study was to assess the performance of CBT ventures on the socio-economic lives of local community around Volcanoes National Park, the TPI provides the degree to which tourism has become part of the community economic activity. It assists the community, Musanze District Local

Administration, Rwanda Development Board (RDB) and other stakeholders to know the role of tourism in socio-economic development of the communities.

TABLE 5
CONSTRUCTION OF TOURISM PENETRATION INDEX AND PARK TPI SCORE

Selected Tourism Indicators	
Spend/Population	91,447.58
Visitor Density per 1000	0.0021
Rooms Km ²	0.47
Land use Acres	0.56
Employment Ratio/Population	0.003
Impact Indices	
Spending	0.084
Density	0.0021
Bed capacity	0.16
Employment	0.11
Land use	0.101
TPI score	0.457

However, TPI of Kinigi and Nyange sectors showed very low tourism development and limited community participation. This means that currently tourism is less visible as a major development strategy. This requires a major community-wide planning effort to achieve three objectives: (1) to identify the unique assets/attractions; (2) to encourage tourism investment and; (3) to determine the sectors identity compatible with the “genius of the place”. This is a formidable task necessitating development of a special policy by the district of Musanze to use tourism as a local economic development tool. The three impact scores provided by the TPI also mean that tourism development should be socially acceptable, environmentally compatible and economically viable.

3.4 Contributions

The CBT initiatives resulted in the provision of community-based accommodation (in form of *bandas*, tented camps, camping grounds, cottages and hostels), craft making and selling, food services, guiding services, economic -museums, retail shops, car hires and motorcycle transport services. Income realized from these initiatives formed a critical alternative finances for household/community livelihood improvement. Participant responses put these as alternative means of survival apart from agriculture, retail businesses and motorcycle riding as community major livelihood activities. Overall, it was estimated in focus group discussion that households participating in these activities generate over 12,778.83\$/month which was 28.2% more than that realized from other activities. The estimated total flow of funds into local households’ budget from tourist hotels in the area is 13,093.9\$/month. Generally, at Kinigi and Nyange Sectors the shares of benefits generated were noted to be high. This was expected mainly because two sectors are the most active in terms of having a high number of business ventures (both private and by communities). Field data further reveals that the CBT ventures had over 500 people employed directly or indirectly in tourism activities forming over 60% of local people employed in an alternative sector apart from agricultural sector.

This means that CBT approach have a significant contribution in local communities’ livelihood. Lo & Janta(2020), argue that the contribution of livelihood in terms of employment and income are critical in asset building. The contributions of this study mostly focused on community asset building which was the focus of SNV. Asset building was noted by SNV to increase community ability to adapt and transform. Community adaptive capacity response to change. It involves informed decision-making, forward-looking planning and flexibility created through CBT approach. While transformative capacity implied structural and systemic changes that enable the communities to improve other capacities.

IV. IMPLICATIONS OF THE RESEARCH AND CONCLUSION

4.1 Implications

Rwanda's tourism industry has witnessed a faster growth and is now a major source of foreign exchange income, creating much-needed employment and development opportunities (Mora et al., 2019). With a steady increase in non-resident visitor arrivals and domestic movements, it is important to understand how tourism development in Volcanoes National Park (especially CBT) may be a major sector for the park and community economic development. As evidenced by a number of scholars including Pasanchay(2019), many communities are actively pursuing tourism growth, yet the substantial and growing CBT remains relatively unnoticed and poorly documented in tourism development particularly in Kinigi and Nyange sectors in Musanze District. Understanding the role of CBTs more thoroughly through planned research is a logical step in better evaluating partly park tourism development in Kinigi and Nyange sectors, and this can help to ensure that both the national tourism objectives and the demands of tourists can be met as well as allowing sound marketing decisions to be made by the Rwanda Development Board (RDB) to promote tourism in Musanze District. Le et al.,(2016), observed that CBT referred to in the early 1980s as the sine qua non of alternative tourism, aided rural communities in the global south through grassroots development, resident participation, empowerment and capacity building. Community Based Tourism plays a great role in community development, capacity building, local control and local enterprise development, sustainable livelihoods and poverty alleviation (Kaur et al., 2016). The criteria identified by various scholars like (Haque et al., 2016), were tested in this study to evaluate the success of tourism development in Kinigi and Nyange sectors, Volcanoes National Park in relation to community participation, benefit-sharing, tourism resources conservation, partnership and support from within and outside the community, local ownership, and scale of tourism development. Based on a wide range of case studies in various countries, this study concurred with Hatton(1999), conclusion that while CBTs present an opportunity for economic gain, leadership, empowerment and employment in Kinigi and Nyange sectors. This was done in this study by assessing CBT initiatives and their benefit streams to the communities around the park. The study also concurred with Bittar Rodrigues & Prideaux (2018), assertion of the four dimensions of community empowerment: economic (income and employment related); psychological (considers community pride and self-esteem); social (community cohesion and well-being); and political (shift balance between the powerful and powerless, between the dominant and dependent, for greater political equity) through CBT initiatives in Volcanoes National Park. But, it was observed that CBT initiatives in the park lacked full dedication to projects, as most residents were engaged in farming activities, retail trade and other traditional activities they have been performing over generations.

4.2 Conclusion

The study noted the following as key conclusions.

1. Four types of CBT initiatives have emerged in Volcanoes National Park area: businesses that employed local residents, family-ran enterprises, joint venture with private sector and community-based social enterprises.
2. Majority of local residents who participated in tourism are in the age bracket 30 – 40 and completed either secondary or tertiary education showing that CBT only attracted educated people.
3. Operational and marketing factors influenced by policy and technical supports acted as critical success factors to facilitate CBT approach.
4. Tourism development for communities living around protected areas is still low determined by TPI. This supports previous findings on low tourism development in a number of small communities due to limited local initiatives.

ACKNOWLEDGEMENTS

We are pleased to thank all respondents who voluntarily accepted to provide the necessary information that were used in this study.

REFERENCES

- [1] Aboniyo, J., & Mourad, K. A. (2017). Role of community based organizations in transferring climate change information in Rwanda.
- [2] Bittar Rodrigues, C., & Prideaux, B. (2018). A management model to assist local communities developing community-based tourism ventures: a case study from the Brazilian Amazon. *Journal of Ecotourism*, 17(1), 1-19.

- [3] Farmer, P. E., Nutt, C. T., Wagner, C. M., Sekabaraga, C., Nuthulaganti, T., Weigel, J. L., . . . Karasi, J.-C. (2013). Reduced premature mortality in Rwanda: lessons from success. *Bmj*, 346.
- [4] Gohori, O., & van der Merwe, P. (2020). Towards a tourism and community-development framework: An African perspective. *Sustainability*, 12(13), 5305.
- [5] Haque, M., Reza, M., Alam, M., Ahmed, Z. U., & Islam, M. (2016). Discovery of a potential site for community-based sustainable ecotourism in the Sundarbans Reserve forests, Bangladesh. *Wasiul, Discovery of a Potential Site for Community-Based Sustainable Ecotourism in the Sundarbans Reserve Forests, Bangladesh*, 553-566.
- [6] Hatton, M. J. (1999). *Community-based tourism in the Asia-Pacific* (Vol. 99): School of Media Studies.
- [7] Hussin, R., & Kunjuran, V. (2014). Sustainable community based tourism (CBT) through homestay programme in Sabah, East Malaysia. *Proceeding of the Social Sciences Research ICSSR, 2014*, 41-61.
- [8] Kaur, P., Jawaid, A., & Othman, N. B. A. (2016). The impact of community-based tourism on community development in Sarawak. *Journal of Borneo Kalimantan*, 2(1), 15-26.
- [9] Le, T.-A., Weaver, D., & Lawton, L. (2016). Community-based tourism and development in the periphery/semi-periphery interface: A case study from Viet Nam *Reframing sustainable tourism* (pp. 161-181): Springer.
- [10] Lo, Y.-C., & Janta, P. (2020). Resident's perspective on developing community-based tourism—a qualitative study of Muen Ngoen Kong Community, Chiang Mai, Thailand. *Frontiers in Psychology*, 11.
- [11] Mak, B. K., Cheung, L. T., & Hui, D. L. (2017). Community participation in the decision-making process for sustainable tourism development in rural areas of Hong Kong, China. *Sustainability*, 9(10), 1695.
- [12] Mayaka, M. A., Lacey, G., & Rogerson, C. M. (2020). Empowerment process in community-based tourism: Friend relationship perspective. *Development Southern Africa*, 37(5), 791-808.
- [13] Mora, J. A., Yamova, O., & Murtuzaliev, T. (2019). Community-Based Tourism as the Leading Approach to the Rural Development. *Sustainable Leadership for Entrepreneurs and Academics*, 503-510.
- [14] Njenji, J. (2020). Community-based Tourism in Rwanda.
- [15] Nugroho, P., & Numata, S. (2020). Resident support of community-based tourism development: Evidence from Gunung Ciremai National Park, Indonesia. *Journal of Sustainable Tourism*, 1-16.
- [16] Pasanchay, K. (2019). An Examination of Rural Homestay Operations through the Lens of the Sustainable Livelihood Framework: A Case Study of Phou Khao Khouay National Park Community-Based Tourism (PKK NP CBT), Lao PDR.
- [17] Pemayun, A., & Maheswari, A. (2017). Economic impacts of craftsman statue on community based tourism development. *International Journal of Social Sciences and Humanities (IJSSH)*, 1(3), 59-73.
- [18] Phuong, N. T. M., Van Song, N., & Quang, T. X. (2020). Factors Affecting Community-Based Tourism Development and Environmental Protection: Practical Study in Vietnam. *Journal of Environmental Protection*, 11(2), 124-151.
- [19] Safari, E. (2017). *A model of the contribution of information communication technology to the tourism value chain for pro-poor benefits in Rwanda*. Cape Peninsula University of Technology.
- [20] Zielinski, S., Kim, S.-i., Botero, C., & Yanes, A. (2020). Factors that facilitate and inhibit community-based tourism initiatives in developing countries. *Current Issues in Tourism*, 23(6), 723-739.