

Community-based tourism (CBT) advancement and sustainable tourism enterprise establishments in marginalized rural municipalities: context for ecotourism development in parks-adjacent communities

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Abstract

Purpose – The present state of tourist development projects in Musina Municipality, located in Vhembe District, Limpopo, South Africa, is examined in this paper. As a result, it incorporates their possible influence on the improvement of local parks and protected areas as well as the abutting communities' standard of living. Thus, also including the supply and demand for tourism services in rural neighborhoods and emerging economies.

Design/methodology/approach – With published and gray literature, surveys, interviews, focus groups and document reviews were employed. Field observations supplement primary sources to a lesser degree. Data were manually sorted and then subjected to cross-tabulation analysis using Microsoft Excel.

Findings – The analysis of earlier research and respondents' answers about their expected effects on tourism developments outlines the policy and strategy components that have influenced Musina Municipality's historical and contemporary tourism statuses. The study's conclusions indicate that while Musina Municipality has a multitude of tourism options, its local biodiversity-inclined and effective tourism plan is deficient in the study area. A commanding strategy would empower the residents and provide a significant index for rural tourism development.

Originality/value – In South Africa's northern Limpopo Province, Musina Municipality is one of the driest areas. Poor rural communities are another feature. Nonetheless, it is situated within the Vhembe District of the Limpopo, a tourism-oriented area. Furthermore, significant resources remain underestimated despite being used to benefit rural communities in most African countries, benchmarking worldwide.

Keywords Community-based tourism (CBT), Ecotourism, Sustainable tourism plan, Tourism enterprises, Sustainability, Sub-Saharan Africa, Musina municipality, Vhembe district

Paper type Case study

1. Introduction

Scholarship on sustainable tourism and the improvement of local populations' standard of living has increased dramatically in recent years (Buckley, 2012; Edgell, 2019). However,

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little research has been done on the relationships between various forms of tourism in biodiversity-rich remote regions, particularly in sub-Saharan Africa and emerging economies (Schmallegger and Carson, 2010; Schmallegger *et al.*, 2010; Ramaano 2023a, b). Therefore, there is a duty to invest in tourism, especially in rural regions; the government has made the tourist sector and its growth a priority (Ntonzima and Binza, 2011; Lebambo, 2019). As such, it is essential to empower marginalized and historically underprivileged groups (HUGs) through biodiversity conservation, tourism and hospitality programs (Thakur *et al.*, 2023). Broadly, the term “sustainability transformation” (ST) entails changing companies in order to improve society, the economy and the environment. Nowadays, people view sustainability as a strategically significant management concern rather than as a “desirable element” of social benefit (Henriksson and Grunewald, 2020). Likewise, prior to the 2006 tourism plan and later ones, Musina municipality was focused on enhancing tourism, which was reflected in a number of integrated development plans (IDPs) and biodiversity-linked tourism development goals. The development of the Musina copper mine as an attraction for visitors was one of these initiatives (Ramaano, 2022a). One of the top priorities was building a museum that would showcase the region’s rich cultural and natural treasures as well as its past. In order to do this, the proposal also included a leisure park. Therefore, the establishment of more baobab trees to improve the outer edges of the town area was also of great importance at that time to date. This would increase the general appeal of this region and bring in more tourists to meet the needs of people of all ages. However, Ramaano (2024a, b) claims that this program and numerous others never amply materialized. With this, the plan was also meant for building cultural villages to improve Musina Town’s industrial makeup and provide additional lodging options to support local and regional tourism enterprises. Among the priorities of the suggested strategy were the construction of the tourist pathway that connects the Mapungubwe National Park and the Kruger National Park via Musina and the acceptance of the prime location between the two national parks (Musina Municipality, 2018).

In line with the IDP rationales, the local biodiversity-linked Bead Making Project had to be established in one of the domestic wards as part of the previous plans for a varied arts and crafts center and cultural heritage tourism development in Musina Town (Kayamandi development services, 2007). Also, highlighting the essence of pottery making from the local landscape enriches the market for ethnic, cultural heritage and ecotourism enthusiasts (Ramaano, 2024b, e). Moreover, the provincial roads, such as the road to Punda Maria on the southern side of Kruger National Park and the Alldays area to the western side-bound Platjan bordering post, also included the enhanced categorization of tourist sights among the earlier goals of Musina IDP. Set priorities for tourism enhancement venues, including the Limpopo River, the eastern side-bound Mozambican surroundings and the northern side-bound Botswana and Zimbabwean borders (Musina Municipality, 2018, 2019; Ramaano, 2021a, 2022a). Accordingly, Labanauskaitė *et al.* (2020) suggested that appropriate tools be used in the management and commerce of tourism organizations. According to Swatuk (2005) and Moswete (2009), there is a chance that tourism might support biodiversity conservation in developing countries such as Botswana and South Africa by promoting livelihood initiatives in the host areas and utilizing the concept of community-based natural resource management (CBNRM). In order to do this, CBNRM involves local, community-based individuals (the community) working together to determine the most effective ways to preserve and utilize natural assets on their shared land (DEAT, 2000a). As such, it can work in tandem with agritourism and ecotourism in community-based tourism (CBT) offerings, especially in countryside and outskirts regions. In backing of the aforementioned, Gupta (2014) concluded that, from a Botswana viewpoint, the successful growth of tourism in sub-Saharan countries necessitated a rethinking of society with regard to CBNRM activities and their success. Zingi *et al.* (2022), with a Zimbabwe case study, note that ecotourism and wildlife conservation by associated businesses are powerful economic drivers and political motivators that help underprivileged rural people overcome extreme hardship. While it is true that some underserved rural areas face apparent challenges in providing for their residents and drawing visitors, social and traditional entrepreneurs play a crucial role in creating

new ideas, organizations and businesses to envision a future for the region (Ellis, 2010; Saebi *et al.*, 2019). The latter aligns with Mtetu *et al.*'s (2025) appraisal of the value of Indigenous knowledge in Tanzanian cultural tourism endeavors. Citizens of Musina Municipality can thus benefit from the rich biodiversity and diverse cultural and natural heritage riches and promote preservation of Indigenous knowledge systems (IKS). Cultural ecosystem services (CES), a subset of ecosystem services, have significant effects on the advancement of society and the welfare of people (You *et al.*, 2024). Community-based ecotourism (CBET) is identified by Ma *et al.* (2019a, b) as an effective technique for resolving issues between ecological preservation and development. This is crucial for economic improvement initiatives and for reducing poverty in the destination regions' society through tourism incomes (Goodwin, 2008; Ma *et al.*, 2019a, b). In the end, and akin to this study's rationales, the contents of the municipality's prior plan and intended strategy endorsed a biodiversity-bound tourism framework with a focus on community development. This was along with the significance of a supportive public policy existence and tourism development creativity. Societal and regional entrepreneurial retailers, commodities such as art crafts, and the promotion of natural biodiversity goods with tourism interactions and relevance were central to the strategy. However, even with such buoyant visions, sometimes things never manifest comprehensively according to intended outcomes.

The question under consideration is, how can we develop an accurate and uniform tourism-oriented integrated local development strategy (ILDS) in the biodiversity-bound and potentially diverse forest-based livelihood resources of Musina Municipality? The problem statement focuses on the municipality's nature of preciseness and predictability with regard to its past and current plans regarding the value of biodiversity and strides that tourism can enforce within its development. Although prior tactics and goals seemed to be in the right direction from a broader perspective. This study contends that by reviewing the municipality's previous tourism plans and approaches, one can have a foundational perspective that emphasizes aptitude as well as required facets. Hence, they should be able to be incorporated within the present moment and prospective tourism projects for society development and sustainability in the study region.

2. Literature review, theories and concepts

2.1 Main theory

2.1.1 Sustainable tourism theory and sustainability concept. The theories and concepts of sustainability and sustainable tourism development are supported by this inquiry. According to Emina (2021), sustainability means that the present generation should manage and use resources without sacrificing the demands of future generations. Accordingly, sustainable tourism development suggests that tourism resources are preserved and frequently improved for both current and future use and enjoyment by locals and tourists in a way that is acceptable to the local society and culture (Muhanna, 2006; Yfantidou and Matarazzo, 2017; Ramaano, 2022a). In the literature, sustainability and sustainable tourism development are used interchangeably. They are significant for nature conservation tactics, ecotourism and tourism-based livelihoods within the rural communities' welfare and the study area (Bennett *et al.*, 2009; Torres-Delgado and Saarinen, 2017; Spenceley, 2021).

2.2 Integrated theories

2.2.1 Sustainable livelihood approach. While the study does not primarily and fully utilize the SLA in its mission design. It thus, however, points out the significance of the sustainable livelihoods approach (SLA) to guaranteeing rural livelihood via examples of synthesized results and discussion. It also underscores the fundamentals of SLA and its comprehensive potential application in its final and suggested components. Thus, this investigation realizes the pivotal role of tourism entrepreneurship and CBT development in SLA outcomes

(Zielinski *et al.*, 2021). Since their introduction in the early 1990s, the SLA (DFID, 1999; Solesbury, 2003) and the sustainable livelihoods framework (SLF) (Mensah, 2011; UNDP, 2017) have been essential components of both theoretical and practical fieldwork, especially in developing nations' rural areas (Scoones, 2015). Despite not being a method in and of itself, the SLA prefers some approaches over others (Young, 1999; Barcelos, 2003). Rapid Rural Appraisal (RRA) gave rise to Participatory Rural Appraisal (PRA), an assessment and learning methodology that focuses on empowering residents to actively evaluate their own lifestyles, problems and opportunities for change (Narayanasamy, 2009). It can help with tourism in rural regions and livelihood strategy development. Innovative approaches such as participatory learning and action (PLA) complement the aforementioned work (Mukherjee, 2002; Sanginga, 2009). As stated by Tao and Wall (2009) and Morse and McNamara (2013), the focus of SLA is on human beings' welfare. A tactical strategy geared to an organization's community-based stakeholders is known as community engagement (Pollock and Whitelaw, 2005). Researchers, community citizens, and other stakeholders collaborate to tackle community concerns and enhance health and well-being through the use of community-based participatory research (CBPR) (Wilson *et al.*, 2018; Ramaano, 2025b). The process of enhancing a non-profit's operational, programmatic, financial or institutional maturity is known as capacity building (De Vita *et al.*, 2001). A broad definition of community participation is when members of a community get involved in initiatives to address their own issues (Butterfoss, 2006). Empowerment policy, capacity building and community participation form a significant part within the community-based organizations (CBOs) anchored in SLA and tourism-rural livelihoods initiatives in local governments and municipalities (Höckert, 2009; Ohe, 2020). According to Sati (2017) and Li *et al.* (2020), the SLA is based on the five livelihood capital assets: financial, natural, physical, social and human capital. However, Shen *et al.* (2008) suggest that tourism livelihoods be considered in a wider tourism context since the tourism scenario may not be entirely covered by SLA. This is a fundamental stride towards transitioning to a sustainable tourism livelihood approach (STLA). Meanwhile, Gutierrez-Montes *et al.* (2009) contend for seven capitals with the addition of built and political capitals.

2.2.2 Sustainability transition theory. According to the sustainability transitions theory, society must undergo systemic changes in order to address the current environmental catastrophe (Loorbach *et al.*, 2017). Understanding how socio-technical systems shift toward sustainability and how to support this shift are the goals of the sustainability transitions inquiry (Geels, 2010). In the words of McMeekin and Southerton (2012) and Geels (2018), sustainability transitions are long-term structural transformation processes that lead to more sustainable social structures. They involve significant shifts in fundamental associations and ideals as well as in how people act, think and organize. The process of changing companies, procedures and the economy to consider their effects on the environment and society is referred to as “sustainable transformation” or the “sustainable transition” (Ernst *et al.*, 2016; Schaltegger *et al.*, 2016). A growing number of people are interested in and aware of the idea of fair transition, which is generally understood to mean ensuring that no one is left behind or pushed behind in the shift to low-carbon and environmentally sustainable economies and social systems (Newell and Mulvaney, 2013; Wang and Lo, 2021). This study dwells on the notion that sustainable tourism, ecotourism and CBT developments can offer a nature-based solution to sustainability issues in most rural areas. This can boost access to livelihood capitals and outcomes in these biodiversity-rich regions. In the same way that constructed infrastructure, such as roads and water systems, offers people useful services, ecological infrastructure refers to naturally occurring ecosystems (Huang *et al.*, 2022). Aside from providing services like catastrophe risk reduction, water purification, and climate management (Ramaano, 2024f), these natural ecosystems—such as wetlands, forests, and rivers—are essential for the growth of CBT and ecotourism. An internationally coordinated action plan, Agenda 21 aims to advance empowerment in society and sustainability (Hopkins and McKeown, 2002).

2.3 Literature review

2.3.1 Practical and worthwhile rationale for sustainable tourism growth, livelihoods and sustainability. Businesses are now required to keep up with the prerequisites of their resources and goods beyond their own interest and accept responsibility for any negative effects of their operations due to the increased worldwide recognition of sustainability (Waddock *et al.*, 2002; Ramaano, 2024b, c). Facilitating responsible subsistence for local populations is also necessary. The key elements for improvement in the tourism industry are consistent infrastructure, capital, knowledge of international marketing and tourism businesses (Apriyanti, 2024). According to international, national and local norms, new institutional orders and policy settings depend on the policy-state components of sustainable tourism (Tyler and Dinan, 2001; Aayog, 2018; Ramaano, 2021a, 2022a). As a result, there is a need to review the advancements in tourism related to sustainable tourism guidelines within specific structures in target locations and related nations, like the study area. The province of Limpopo has a wealth of potential for rural tourism, which is one distinctive type of tourism that ecotourism can strategically manifest in rural areas (Spencely, 2005; Shongwe, 2007). Agritourism is an auxiliary source of income for the purchase of agricultural equipment (Giaccio *et al.*, 2018). As agritourism and more environmentally conscious tourism initiatives are interdependent. Farming and the forestry sector may work in tandem to benefit from tourism and improve the local population's standard of living. Strategic Water Source Areas (SWSAs) are national natural facilities that are critical to water security, according to the South African National Biodiversity Institute (SANBI) [1]. Water from diverse sources is therefore a crucial component of ecotourism and tourism projects in rural areas. While the cool downriver remnants of the Tshipise's Sagole Hot Spring serve the inhabitants' agricultural attempts, the Nwanedi River provides neighborhood-based irrigation projects for the Folovhodwe settlement (Ramaano, 2022a, b, 2023c, e). The former has additional ecotourism potential because of its closer vicinity to the Dambale Bushmen rock drawings for the essence of cultural heritage, geodiversity and total natural diversity. Similarly, apart from its coastal biodiversity and beaches, South Africa's KwaZulu-Natal has its own marvelous tourism-oriented rock art and cave systems, such as the Drakensberg Mountain range's caverns and the KwaXolo caverns (Lander, 2014). As Coats (2011) notes, the majority of nations are working to attain equitable growth in their economies. Nonetheless, tourism and agriculture are two of the many programs focused on developing nations (Saner *et al.*, 2019). Thus, a case study in Kenya is provided by Akama (2002), who reminds us of the vital role that government policies play in directing appropriate and beneficial tourism goods in developing nations. Muhanna (2007) and Nemasetoni (2005) provided evidence for the aforementioned using a case study from South Africa on the contribution of tourism to the growth of Black-owned small and medium-sized businesses and the reduction of poverty. As a result, tourism businesses, conservation and agriculture have an underlying cooperative partnership. Accordingly, it falls between the categories of farm tourism and ecological tourism. Manyisa Ahebwa and van der Duim (2013) discovered that the agreement between local people and Uganda's Bwindi Impenetrable National Park (BINP) in Mukono was productive, using the SLF as a framework for CBT enterprises and local livelihoods. It promoted local employment, provided revenue, offered social services locally and contributed funds for other development initiatives. In a similar vein, Stone (2014) employed the Chobe Enclave Conservation Trust as a case study to examine the advantages and difficulties of CBT and to emphasize the fundamentals of community empowerment in Botswana. Further warning us of the drawbacks of sticking to a single-model approach to CBT and livelihoods, Stone and Stone (2020) promote creativity, diversity and inclusivity.

The importance of capacity building for equitable advancement in CBT efforts is emphasized by Imbaya *et al.* (2019). They looked into and highlighted the many roles that the African Wildlife Foundation's (AWF) capacity-building programs had in the results of CBT programs in Kenya. Like the current study, capacity building and community participation are assessed and suggested in addition to environmental and stakeholder engagement. In order to

improve livelihoods, ecotourism and CBT serve as the foundation for integrated rural activities.

2.3.2 *Importance of ecotourism and sustainability in South Africa, as well as an opportunity for rural tourism and hospitality initiatives in the municipality.* According to [Lee and Jan \(2018\)](#) and [King et al. \(2020\)](#), ecotourism promotes nature-based tourism activities. Consistently, [El Moslem Badr \(2022\)](#) posits that ecotourism is a concept that emerged as a result of the need to integrate sustainable development with conservation. In addition, as noted by [Ushakova \(2023\)](#) ecotourism is a subsection of nature-oriented tourism. Therefore, ecotourism is a sort of tourism that fosters appreciating natural places alongside advancing ecological preservation and maintenance. This is essential for socioeconomic enhancement and poverty alleviation strategies in destination areas through tourism livelihoods ([Ma et al., 2019a, b](#)). Similar to this, ecotourism is a type of travel that encourages both the enjoyment of natural settings and the conservation and preservation of the environment while ameliorating communities' subsistence ([Kiper, 2013](#); [Shoo and Songorwa, 2013](#)). The Musina area households deserve such development for their survival ([Ramaano, 2021a, b](#)). Actually, ecotourism can be identified in numerous niche tourism categories in countryside domains, in particular in varieties such as outdoor tourism, geographic tourism, ethnographic tourism, arts and crafts tourism and agritourism ([Ramaano, 2022a, b, c](#)). South Africa has a wide variety of climates, from desert to tropical in the southeast ([Lovegrove, 2021](#)) As a result, the landscape ranges from breathtaking mountains' biodiversity and features such as the Cango Caves in the Klein-Karoo region in the Western Cape Swartberg trails to vast grasslands, from the seashore to winding rivers to desert sands in the middle. The Limpopo and Mpumalanga border Echo Caves are a popular tourist destination in the province because of their distinctive ringing sound produced when rock formations are touched ([Viljoen, 2015](#)). The country's sophisticated ecological diversity supports a wider variety of species than only the well-known Big Five ([Holmes and Boardman, 2018](#); [Numi, 2021](#)). Mapungubwe National Park (MNP) and International Heritage Site (IHS) in the municipality join other national South African parks and sites that are recognized by the United Nations Educational, Scientific and Cultural Organization (UNESCO) in South Africa and globally. One way to make tourism in rural areas sustainable is through ecotourism. Additionally, Musina Municipality has a wide range of activities. Formal agricultural businesses like the Nwanedi community-based adventure program and other rain-based farming fields are examples of activities. Thus, in addition to ecotourism initiatives, Musina Municipality may be able to fully utilize and capitalize on agritourism. According to the study, Musina Municipality is made up of and encircled by a large number of game lodges and protected areas, particularly in the area surrounding Musina Town, including Musina Nature Reserve, Dongola, Adansonia Eco Lodge and Mopane Bush Lodge on the Mapesu Nature Reserve abutting MNP and IHS ([Ramaano, 2022d, 2023d](#)).

Accordingly, South Africa is at the forefront of one of the most ambitious cross-border projects involving the creation of transfrontier parks in southern Africa ([Ramaano, 2008, c, d, 2021c, d](#)). The renowned Kruger National Park is one of many national parks. Private game lodges range in quality from medium to very upmarket, with ultra-luxury servicing almost purely foreign guests ([Anthony, 2007](#)). CBT, in this sense, is travel where the profits positively affect the entire community ([Suansri, 2003](#)). The advantages ought to be monetary, and the group might be village-based, cooperative or communal. Any proceeds should be spent for the benefit of the community ([Mahony and Van Zyl, 2001](#); [Harrison and Schipani, 2007](#)). This platform is more likely to be used to investigate tourism-related activities in rural South African communities, such as ecotourism, agritourism, cultural heritage, ethnic tourism and others. The Manyeleti and Makuleke tourist initiatives case studies ([Mahony and Van Zyl, 2002](#); [Spenceley, 2003](#)), which feature opulent tented camps located in the Makuleke Concession in the northern part of the Kruger National Park (KNP), are two of the most well-known instances in several South African provinces. This can occur outside of landform claims, even if land claims are essential components of these types of businesses. At the

intersection of political ecology, environmental economics and human settlement dimensions, similar land accusations are still being made today in locations like Mapungubwe and KNP [2]. When the proper procedures are followed, local communities and projects like the Big Tree Nature Reserve, Nwanedi Nature Reserve and the former Sagole Spa offer a lot of promise for CBT and sustainability efforts (Ramaano, 2024b, d). In addition to providing an effective, affordable and easily accessible business licensing system, the Tourism Act 3 of 2014 aims to support the development and advancement of sustainable tourism for the benefit of the Republic and its citizens (Mogale and Odeku, 2018).

The Limpopo Tourism Act 2 of 2009 created the Limpopo Tourism Agency (LTA), which works to develop, encourage and market travel to and within the province of Limpopo (Ramaano, 2021b). The preservation and maintenance of the environment in the province of Limpopo are covered by the Limpopo Environmental Management Act (No. 7 of 2003) (Thompson and Blackmore, 2020). However, the goal of the National Environmental Management: Protected Regions Act (NEMPA) 57 of 2003 is to ensure that environmentally valuable regions are preserved and protected (Goosen and Blackmore, 2019). Other laws, such as the Republic's regulations governing land use management, and spatial planning, such as the Spatial Planning and Land Use Management Act (SPLUMA) 16 of 2013, can help define the connection between land administration and spatial planning (Van Wyk, 2015). The goal of the Restitution of Land Rights Act 22 of 1994 is to restore land rights that were taken away from individuals or communities due to racially discriminatory acts such as forced relocation (Hall, 2004). Numerous prosperous tourism and agricultural businesses for the transition to sustainability and livelihoods are the desired outcomes of these initiatives. However, in order to combat climate change and advance sustainable development, the United Nations Climate Change Conference adopted sustainability principles and the COP 29 objective. In South Africa, Gauteng has set a goal to reduce greenhouse gas emissions to a desirable level by 2030 in accordance with the National Development Plan (NDP) Vision 2030 (van Weele *et al.*, 2017). Gauteng also schedules to adhere to international commitments of the 2015 Paris Climate Change Agreement and Conference of the Parties (COP) 29 to the United Nations (UN) goals through strategic planning and action plans.

2.3.3 Sustainability education and technology in climate change lessons and sustainable development. Information systems (IS) and information technology (IT), including remote sensing (RS) and geographic information systems (GIS), along with CBNRM, sustainable tourism and inclusive public governance, can work together to enhance local community development initiatives in their respective contexts. According to Tsou (2004) and Greene *et al.* (2011), GIS's many forms and integrated techniques, like Participatory geographic information systems (PGIS) and RS, were thought to have a potentially important role in examining environmental conditions, determining places for planned and anticipated developments, defining contradictory issues, modeling commonalities and assisting in the transition to sustainability. Therefore, they are tools and processes for research, image processing, data integration and management (Weng, 2010). Specifically for sustainability lawmakers and directors in tourism growth and implementation, it allows for a more dependable decision-making procedure and technologically and educationally informed verdicts. Hence, it is pivotal to integrate socioeconomic and tourism knowledge, especially in developing countries, and for the core of a community-based approach, including synergies in CBT strategies and applications of community-based GIS in rural areas. These integrative and educational strides can also be integral for climate change adaptation and sustainability achievements. In the sustainability transition, tourism can be an adaptive measure towards climate shock resilience in rural and agricultural areas through revenue creation. By generating income, tourism can help rural and agricultural communities adjust to climate shock resistance during the sustainability transition (Cheer and Lew, 2017; Pascariu *et al.*, 2021). Alternative agritourism earnings can support the technologies needed to mitigate the effects of climate change to ensure livelihoods while also applying social consciousness and Indigenous knowledge to climate change resilience (Valdivia and Barbieri, 2014; Yang *et al.*, 2024). Using a case study from Malaysia,

Mohamed Sodom *et al.* (2022) suggested the importance of government programs and green marketing tactics in frugality. In order to create suitable measures for the sustainable development goals and sustainability. Mohamed Sodom *et al.* (2025) further urge thriftiness to pave the way for sustainable tourism in Malaysia’s tourism sector. However, in order to reach desired aims, tourism operations should abide by sustainable and responsible ideals of socio-economic and environmental sustainability. Using Tanzanian hostel firms as a case study, Njoroge *et al.* (2019) emphasize the importance of technology adoption in the hospitality industry to spur innovation and sustainability measures. The effects of tourism development on rural communities worldwide are brought to light by McGehee *et al.* (2015), among other sustainability literature. They believe that one of the tools for sustainable development was found to be tourism. As a result, it highlights the importance of education and technology in the sustainability transition and calls for the participation of several stakeholders and executives, including educational institutions. Public governance responsibilities frequently have an impact on education and the dissemination of credible public services, and the operations of libraries supported by GIS can be crucial for communities in developing nations as measured and related to the global scenario.

3. Study area and methods

3.1 Location attributes

The Musina Municipality is a subdivision of the Vhembe District Municipality. Located in the isolated “North-Eastern” part of the province of Limpopo, it borders Zimbabwe to the north through Kruger National Park and Mozambique to the east. According to the location map in Figure 1, the Musina Municipality is 289,393 hectares and 2,893,936 kilometers in size.

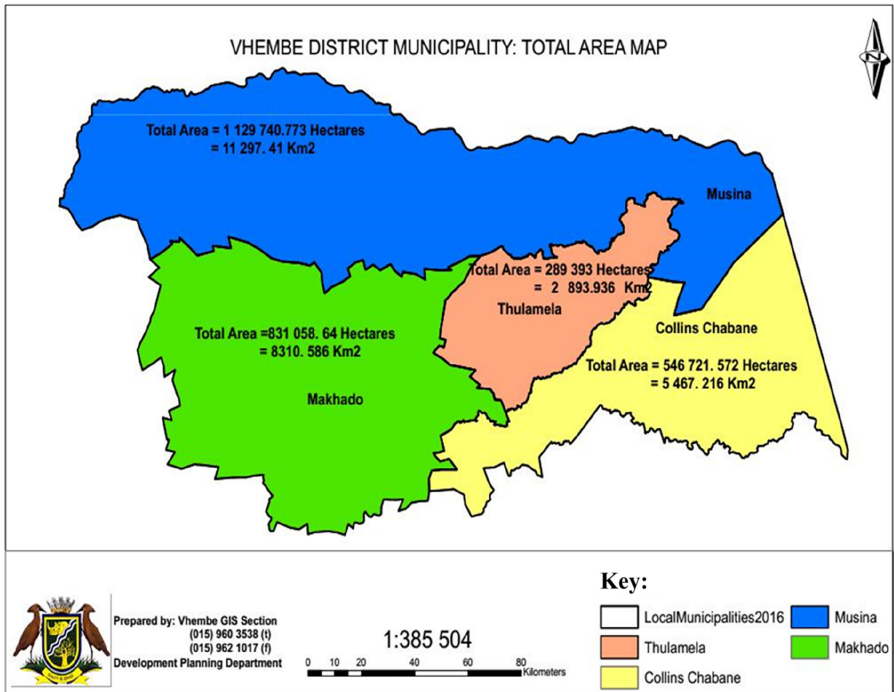


Figure 1. Location of the study area. Source: Vhembe District Municipality, 2017

The total area of Makhado Municipality is 8310.586 kilometers and 831,058.64 hectares. As a result, Thulamela Municipality is significantly smaller. The region offers exceptional potential for tourism (Musina Municipality, 2019). The Transfrontier Park Project and MNP, formerly known as Vhembe-Dongola National Park, a World Heritage Site (WHS), are significant parts of the municipality. It is close to the Limpopo Valley and nearby tourist destinations in Kruger National Park include the Pafuri Camp, coal fields and nickel mines. It shares borders with Botswana, Zimbabwe, Namibia and Mozambique to the north; the Atlantic and Indian Oceans to the south; and Lesotho and eSwatini (formerly Swaziland) in the eastern region of South Africa. Other significant positional African map data on sub-Saharan nations like Kenya and Tanzania can be accessed at <https://geology.com>. Rwanda, Burundi and the Democratic Republic of the Congo border it to the west; Zambia, Malawi and Mozambique to the south; Kenya and Uganda to the north; and the Indian Ocean to the east.

The region experiences a consistent, high summer temperature every year. The municipality receives only 464.1 mm of rainfall annually, making it mostly desert. Mountain fynbos, baobab trees and sacred forests are all present in the setting. The Kruger National Park [Pafuri Gate], the Big Tree in Zwigodini Village, the Tshipise Forever Resort, the Musina and Nwanedi Nature Reserves and Resort and other conservation areas and tourism-attracting projects are typical (Musina Municipality, 2011, 2019). There was also a plan to expand the tourism informational center, which was apparently a too-small location for tourism information enterprises as well as encourage the branding capacities of the Blouberg Mountains in diverse overlapping strategies. Unfortunately, in light of the aforementioned, the tourism data desk was still as small as it was previously during the observation. However, the new ring road has just recently become functional and gives a fresh breath towards increased traffic, commerce and development in business and livelihoods, which is good for tourism and hospitality (Ramaano, 2024b). Owing to the recent N1 ring road, Musina is working on gaining city status, and Beitbridge is still to get municipality status. In the bigger picture, Musina boasts world-class roads and improved infrastructure (Daimon, 2023).

3.2 Data and methods

The study's methodologies are designed to assess rural tourism offerings and community development projects in Musina Municipality, Limpopo Province, South Africa: a prognosis for the growth of ecotourism in Africa. The research was conducted using the ethical clearance certificate that the University of Venda gave for the primary study on "tourism prospects." It guided the entire subject area research procedure and the relevant data publication that followed. The study employed a mixed-methods approach using both quantitative and qualitative surveys because of its informative statement (Ramaano, 2019, 2022e, 2023e). The study employed focus groups, questionnaires and interviews as primary research methodologies, with document reviews serving as a main supplement. To a certain extent, field observation and photographs aided the data outlook. In the study, purposive sampling was used. A purposive sample is a non-probability sample whose purpose is established by the features of the population and the study's objectives. *The sample size calculation and rationale of the study:* Taro Yamane's formula was used to determine the sample size, $n = N / (1 + Ne^2)$, where e is the precision level, n is the sample size, and N is the population size. There are 4,947 people living in the research area that is being presented, made up of Folovhodwe, Gumela, Tshipise and Zwigodini in Musina Municipality. The sample size was determined as follows, with the sampling precision fixed at 5% (i.e. $e = 0.05$):

$$n = N / (1 + 4,947 \times 0.05^2)$$

$$n = 4947 / (1 + 4947 \times 0.0025) = 370$$

Consequently, the sample size was roughly 370. Four villages were specifically selected. Plate 1 shows the gate entering Big Tree Nature Reserve, Zwigodini "Madifha" Village, while



Plate 1. Entrance gate to the big tree nature reserve, Zwigodini “Madifha” Village. **Source:** Author, 2019

[Plate 2](#) depicts a swimming pool attached to the mountain hill in “The Big Tree Holiday Lodge.” It also suggests that the stipulated villages are near several tourism-related activities, such as the Nwanedi Nature Reserve and Resort. [Plate 3](#) shows the main infrastructure building part inside MNP, while [Plate 4](#) is the snapshot that shows the landscape part with animals inside MNP. [Plate 5](#) presents a signage board of the Mapungubwe cultural landscape (MCL) of the MNP, and [Plate 6](#) is the internal surroundings and decoration in the Mapungubwe Interpretation Centre (MIC). The plates generally manifest extra field observation to broaden the sense of the study and demonstrate tourism aptitude, biodiversity and the rich natural and cultural heritage of the MNP and the region apart from the specific areas.

The poverty and conditions of the communities in the surrounding conserved areas encouraged the selection of the study area. As a result, as shown in [Table 1](#), the selected sites are also near protected areas, including the “Big Tree Nature Reserve,” Sagole Spa Hot Spring and Luphephe Dam, among others. Therefore, the distribution of questionnaires among the chosen villages in the Musina municipal region is likewise displayed in [Table 1](#). Consequently, [Table 2](#) lists the nearby tourism-related businesses and organizations that were interviewed in the research region.



Plate 2. Swimming pool is attached to the mountain hill as a source of water in a private lodge entity next to the big tree nature reserve. **Source:** Author, 2019



Plate 3. Part of the main infrastructure building inside Mapungubwe National Park. **Source:** Author, 2023



Plate 4. Snapshot of the landscape part with animals inside Mapungubwe National Park. **Source:** Author, 2023



Plate 5. Signage board of MCL of the MNP in Musina municipality. **Source:** Author, 2023



Plate 6. Internal surroundings and decoration in the MIC at MNP. **Source:** Author, 2023

Table 1. Selection of villages and calculation of sample size

Villages	Population	Calculation formula and percentages	Sample size and allocation of questionnaires per villages
Folovhodwe	2,806	$57\% \times 370 = 210.9$ (Rounded to 211) = 211	211
Gumela	383	$8\% \times 370 = 29$	29
Tshipise	1,052	$21\% \times 370 = 77.7$ (Rounded to 78) = 78	78
Zwigodini	706	$14\% \times 370 = 51.8$ (Rounded to 52) = 52	52
<i>Total</i>	<i>4,947</i>	<i>100%</i>	<i>370</i>

Source(s): Musina Municipality, 2011/2019

Table 2. Tourism ventures and allocations of interviews from designated questionnaires on tourism ventures personnel

Name of tourism ventures and their activities	Location of the tourism venture (villages)	Interviewees per venture/entity
Nwanedi nature reserve and resort, (Luphephe dam)	Gumela (/Folovhodwe) villages	5
The big tree holiday accommodation	Zwigodini (Madifha) village	5
Manalani lodge; (Sagole Spa hot water spring)	Tshipise village	5
The Big tree nature reserve (big baobab and Marula trees)	Zwigodini (Madifha) village	5
Beria Madzonga resort	Zwigodini village	5
Musina LED and Tourism info	Musina Municipality (Musina town)	5
<i>Total</i>	<i>6</i>	<i>30</i>

Source(s): Musina Municipality, 2011/2019

As stated earlier, the study was based on focus groups, field observations, interviews and household surveys. Data were gathered using both primary and secondary sources in line with the study's key conclusions. Consequently, data were acquired through (1) literature research

(mostly from the Kayamandi Development Agency and the IDP plans of the towns of Musina) [document reviews from 1 March to 30 June 2019]. (2) Interviews ($n = 30$), (3) questionnaires ($n = 370$), (4) focus group talks ($n = 20$) and (5) field observations (conducted concurrently with questionnaire surveys, interviews and focus group discussions; Photos were collected between 1 March and 15 June 2019 and extend to recently). The designated sources created various meeting schedules; some preferred morning sessions, while others concluded in the afternoon. The research sessions were also impacted by factors linked to distance. For the duration of the entire study procedure, locations near the starting point were assigned morning slots, while locations further away were assigned afternoon slots. Getting the main IDP material of the study was the central objective of the document review. Furthermore, interviews, questionnaire surveys, focus groups and field surveys all independently bolstered each other. To ensure fair representation and efficient data gathering, all community members—including those from lower socioeconomic categories and those who are very active—were invited to participate in and facilitate the focus group discussions. The researcher made prior phone calls and set up the dates for interviews with pertinent and local conservation and tourism entities, with assistance from the research assistant and local agent. A 100% response rate of survey data was guaranteed by a combined method, where questionnaires were distributed and collected later, and in several instances administered and completed in person. [Dobson and Ziemann \(2008\)](#) state that primary sources were eyewitnesses' first-hand recollections of the incident, but secondary sources were a step distant from primary sources and excluded eyewitnesses. Furthermore, according to [Vartanian \(2010\)](#), secondary data are information that has been documented by other specialists for purposes other than the specific research.

In the end, the previously obtained data were secondary data. As such, it pertains to particular initiatives that aren't publicly available ([Ramaano, 2021a, 2023a](#)). Local economic development strategies (LEDs) and the Musina Municipality's (prior) integrated development plans (IDPs) were among the several sources from which the secondary data for this study was centrally collected. It was therefore backed by a thorough examination of several kinds of literature. The main focus of the study was on sustainable tourism, integrated rural development and rural tourism. The main themes dwelled on the posed question of tourism activities and facilities' existence and the preference for stakeholder partnerships in environmental conservation and tourism development and CBT preparation. Both qualitative and simple quantitative data analysis were applied to the investigation. Although a mixed approach was used, overall, the study was mainly qualitative and exploratory, with a predominance of descriptive statistics. The data from focus groups and interview conversations were manually arranged using spreadsheets, Microsoft Excel, cross-tabulation analysis and central tendencies. Percentages summarized data and identified trends while central tendencies distinguished value within the gathered information. The following parts present the study's findings and discussions.

4. Results and discussions

4.1 Age and gender distributions of the households in the research area

According to [Ramaano \(2022a, 2024b\)](#) and [Musina Municipality \(2019\)](#), there were 54% men and 46% women in the research region. They are mostly in the 20–46 age range, which reproduces 50.8% more frequently than other age groups. A total of 35% of the respondents are between the ages of 46 and 65 and older. While 11.6% of the respondents had never tried any formal education, over 21% had some university education, 33.7% had secondary education and 33.7% had primary education. The size of the household ranged from 1 to 2 to 7+ individuals; however, the majority of respondents (37.2%) had 3–4 and 5–6 members, respectively, while 13.4% had 7+ members. It is therefore easier to help individuals with 1–2 members, as reported by 11.6% of the respondents, than those with more. Both sexes can benefit from tourism's dependable employment opportunities. Additionally, it provides

educational credentials for both age groups in host regions when the right policies and approaches are implemented, which lessens the financial burden on different family sizes in landlocked regions.

4.2 Findings based on survey, interviews and focus group discussions

4.2.1 Responses on any other actual tourism activities in the vicinity of their area. Data in Figure 2 establish that only two respondents replied negatively to the question if there are any other actual tourism activities within or in the vicinity of their area. A bulk of 368 respondents positively replied about any other tourism activities in their area. Thus, only 0.5% of respondents responded “No,” opposed by 99.4% who said “Yes” to such activities’ presence (n = 370). The central tendency for the “No” responses was 0.5 mean (m), 0.5 median (M) and a mode value (1, 0, each appeared 2 times), with a standard deviation value (s) of 0.5. The “Yes” responses had a 92 mean (m), 65 median (M) and (all values appeared just once) mode value (Mo), with a standard deviation value (s) of 70.384. The higher the mean value, the more critical the issue and a low standard deviation would imply stability of notions on the specific variable. While exploring the information and valuing results, all the villages had a dominant positive response to the actual tourism initiatives (questionnaire survey within the four sampled villages distributed between the mornings of 1 March and the afternoon of 30 April and collected between the mornings of 15 May and the afternoon of 15 June 2019).

It can be contended that the study area is generally a tourist-bound area with extraordinary tourism potential. Therefore, the only thing missing is a strategy devoted to the efficient application and management of tourism-based initiatives and services to generate maximum profits for the custodians and adjacent communities. With tourism entities’ interviews not forming part of the posed question, 100% of respondents from focus group discussions affirmed the actual existence of tourism activities within the study area (n = 20) (focus group discussions during forenoons and middays within all the sampled villages on 17/18/19/20 March 2019). Likewise, physical observation images of tourism resources within the study area were testimony.

4.2.2 Envisioned tourism stakeholders in the tourist organizations and projects.

4.2.2.1 Reactions from the respondents on stakeholders in tourism and the environment. “Who, in your opinion, ought to be (significantly) involved in promoting sustainable tourism

Survey responses on any other actual tourism activities in the vicinity

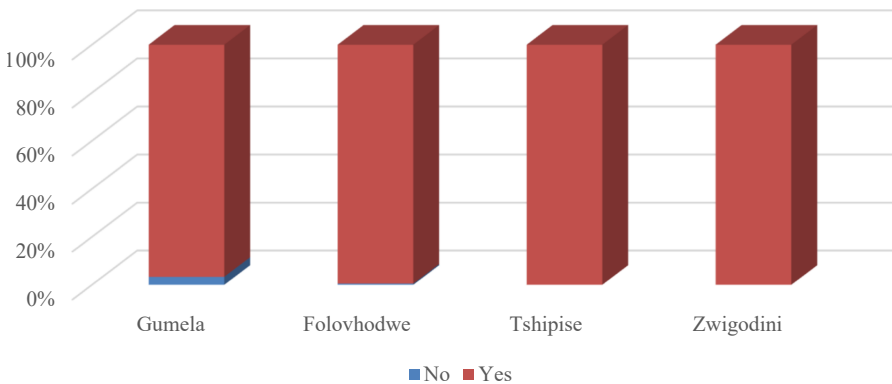


Figure 2. Responses on “any other actual tourism activities in the vicinity of your area.” Source: Author’s own work

as a substitute and successful approach for local community development in the research area?": A significant 53.5% of local community ($n = 370$) survey respondents selected a mix of local communities, governmental and non-governmental organizations that deal with rural and sustainable tourism, according to data in Figure 3. The central tendency for the village government responses was 10.5 mean (m), 4.5 median (M) and a mode value (all values appeared just once), with a standard deviation value (s) of 12.070. The combination of local communities and government responses was 12.5 mean (m), 9 median (M) and 9 mode value (Mo), with a standard deviation value (s) of 10.5. The local communities and non-governmental organizations dealing with rural and sustainable tourism have a mean (m) of 18.25, a median (M) of 17 and a mode value (Mo) of (all values appearing just once), with a standard deviation value (s) of 9.039. The combination of local communities, government and non-governmental organizations for dealing with rural and sustainable tourism had a 49.5 mean (m), 38 median (M) and 114 mode value (Mo), with a standard deviation value (s) of 49.293. The higher the mean value, the more pressing the matter and a low standard deviation would connote the stability of ideas on the specific variable and data that is more clustered around the mean. Therefore, within the typical value of the dataset, Folovhodwe, Tshipise and Zwigodini villages were more dominant, urging for the combination of local communities, government and non-governmental organizations for dealing with rural and sustainable tourism, which tends to be the most all-inclusive course across the continent and abroad.

Meanwhile, 85.0% of focus group participants ($n = 20$) also, cumulatively, favored a combination of local communities, government and non-governmental organizations that handle rural and sustainable tourism as their top choice ($n = 20$), which is in line with the quantitative data analysis shown in Figure 3 ($n = 370$). An identical 66.6% of those who participated in interviews ($n = 30$) went with a mix of local communities, government and non-government organizations involved in rural and sustainable tourism. It is so contrasted with answers to the combination of government and local communities (26.6%). Nonetheless, 6.6% of respondents ($n = 30$) selected non-governmental organizations and local

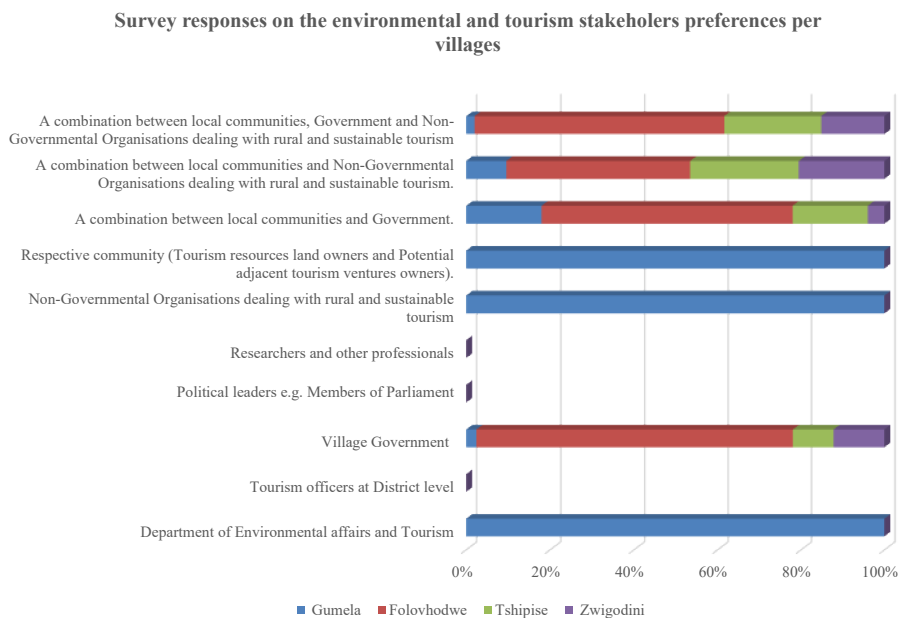


Figure 3. Responses on the environmental and tourism stakeholders. **Source:** Author's own work

communities that work with sustainable and rural tourism. Key informant interviews were carried out in the mornings and afternoons of April 8–10, 2019, inside the six tourist businesses and entities that were sampled. Therefore, with a 5.0% representation each, the “others” category—which includes both local communities and government and local communities and non-governmental organizations that engage with rural and sustainable tourism—shared the spoils. As a result, the focus group response quotes were broadcast carefully in addition to the qualitative method from the collected data (Ramaano, 2024b).

[. . .] According to a Zwigodini member, I believe that in addition to significant collaborations with the government or anybody who can improve our local biodiversity management and tourism growth, a trust fund that supervises the administration of tourism wealth is required. To promote domestic travel and livelihoods, it is also necessary to construct tourist amenities on the grounds of our nearby Big Tree Reserve.

[. . .] I believe there is insufficient leadership in society overall and an absence of unity among the ranks of traditional leaders, which has seen the demise of once-renowned tourist spots luring local spas and hot springs, one participant in Tshipise village was reported as saying. There is no partnership in the development and management of tourism, and local resources are poorly managed; multiple attempts to renovate the spa have failed due to corruption and alleged financial mismanagement.

Residents and local organizations must therefore identify tourism assets, prioritize their conservation, establish development priorities and encourage both immediate and long-term measures, starting with infrastructure development and upgrades.

[. . .] According to a respondent from Folovhodwe village, there isn't a working community-based organization (CBO) that aims to enhance tourism development and livelihoods at the moment. In order to advance sustainability in our region, I believe that such a CBO would profit from a cooperative relationship with pertinent outside parties for conservation and tourism. Therefore, no quote about Gumela village was broadcast in this context.

All of the aforementioned quotes point to a lack of community empowerment, capacity building and social capital. This bears a potentially detrimental impact on a number of other assets, including human, financial and cultural capital in the area. The outcome becomes that of meager rural livelihood with dire consequences of poor biodiversity stewardship (compromised access to natural capital) and ineffective environmental management programs, poor households and home facilities and substandard transport and road facilities (compromised access to physical and built capital). Local government empowering policies, along with the rationale of sustainable tourism, SLA, STLA and actual implementation of sustainability principles, can be invaluable. In the region, this should be benchmarked with other successful stories of CBT and SLA in other districts in the country and other cases in countries like Botswana, Kenya, Uganda and Tanzania. In remote and rural locations, buoyant tourism-related facilities such as resorts and nature reserve nature reserves are often run by government authorities or private sectors (Camilleri, 2018). Local communities, therefore, usually contribute less to the efficacy of these events. In order to get the desired result, the communities aspired for a better combination and sought complete stakeholder involvement. Relating to this, some of the initiatives and entities were photographed and field observations were done for this study.

However, data from the communities that were surveyed reveals an equivalent response to that from the businesses and entities. The three categories of respondents showed dominance, with 13.5% of respondents choosing a combination of local communities and government and 19.7% choosing local communities and non-governmental organizations that negotiate with sustainable and rural tourism. However, 53.5% of those surveyed looked at a mix of governmental, non-governmental and local communities that deal with sustainable and rural tourism. Accordingly, a document assessment of the Musina IDP indicated the prior tourist plans, the current situation and tourism obstacles, which are in line with the industry's replies ($n = 370$). This confirms the necessity of changes in collaboration among stakeholders.

Throughout the study, physical observations and photographs of the relevant images were obtained (data obtained between March 1 and June 15, 2019 and extends to recently).

4.3 Findings based on document reviews and integrated recommendations: implications for tourism, odds and suggested changes

4.3.1 *Plans from the past, Musina IDP activities and other likely tourism development projects in Musina Municipality.* At this point, it is crucial to support and advertise the region's tourism resources. Additionally, the development of a central registry of complete tourism services and the improvement of easy access to critical tourism information for prospective tourists must be given top priority. A significant marketing push to highlight the municipality's resources is still essential to promote the aforementioned. An important effort is still required for Mapungubwe National Park with regard to their marketing and infrastructure (Musina Municipality, 2019; Ramaano, 2024b). Events like the Cultural Festival and other initiatives must be consistently held annually in the study region with the goal of showcasing particular local resources. It is important to give local tour and area guides' training top priority. Therefore, improving the availability of tourist guides and environmental knowledge and their precise interpretation at local locations is a potentially beneficial step. The findings indicate that local communities need to start hosting seminars and initiatives to raise knowledge of tourism. For small, medium and micro businesses and aspiring entrepreneurs, there should be strong tourism-endorsing organizations that offer business growth, pertinent training and tourism development opportunities.

Therefore, the following highlights the core of the previous and existent ambitions that the current investigations sought to synthesize and build on—developing a comprehensive evaluation of the region's biodiversity status and tourism potential and differentiating the region's status in the contexts of southern African tourism, national tourism and provincial tourism: To break down the perspective for biodiversity management and tourism development of the locale to boost its potential, To draw out and recommend the envisaged functionality of each biodiversity spot and tourism destination in terms of the total environment, locate attractions for travelers and set them as targets for safeguarding; To uncover priority for development and push both immediate and future activities, initially prioritize the establishment of tourism facilities for sustainability transition in the study towards current trends (Kayamandi, 2007; Ramaano, 2022a).

4.3.2 *Integrating the prior tourist strategy, current tourism patterns and mixed subsistence opportunities.* The connections between the hunting and manufacturing industries in the nearby rural and peri-urban areas are crucial. Therefore, it ought to coexist with other pertinent projects in addition to leather and tannery output. It can be advantageous to implement programs and marketing channels that impact business relationships between the government and commercial game farms and conservation reserves about livelihoods and the utilization of natural resources. For instance, tanneries and leather makers can use the leather from bushmeat remnants from relevant nature reserves and game ranches. It is essential to open the market for subsistence farming in the nearby community as well as for legitimate CBNRM, beneficiation and bioprospecting activities amongst villages that border the reserves. Therefore, investigating the complexities of land redistribution, restitution rights and forestland tenure transformation is pivotal. In fact, combating poaching and the illegal use of biodiversity depends on it. Finding and removing physiologically essential compounds from natural biodiversity is the goal of bioprospecting. Genes, chemicals, enzymes, structure and other commercially important yields are investigated in plant species. This can be achieved through empowering livelihood initiatives and providing an optional market for leather from domestic livestock. Blackie (2019) examines the effects of the bushmeat ban on rural livelihoods in Ngamiland and Chobe District Areas, Botswana, and van Velden *et al.* (2020) uses examples for comprehending community-based strategies for bushmeat hunting and intake in African savannas. Similarly, abroad, Sun *et al.* (2007) also examined the nature and scope of recreational accidents and factors influencing responsibility insurance coverage for hunters

and anglers in Mississippi. On the other side, aside from their draws for tourists, the “Mopani” [*Colophospermum mopane*], “Marula” [*Sclerocarya birrea*] and “Baobab trees” [*Adansonia digitata*] also yield a number of other beneficial goods. This can open the way for several other domestic species for livelihoods with tourism and without tourism values and could lead to medicinal or food production innovations. Benefits to the tourism sector may follow from plantations, domestication and sustainable harvesting of their products. Many rural areas could benefit from the provided information (Musina Municipality, 2019). The aforementioned three essential species all generate beneficial material from their barks that could be essential for various fabrics and other potential uses, such as the creation of “marula beer” from the marula fruits, conventional butter made from marula seeds and the edible “Mopani worms” [*Gonimbrasia belina*] from Mopani forests (Ramaano, 2021a, b, c). The region may benefit greatly from the integration of tourism-oriented forestry and biodiversity livelihoods, gastronomy, agriculture and historical sites. To date, one of the municipality’s prospective tourism well-being factors is the need to increase the likelihood of tourism-based fascination, particularly in relation to the possible access to the Limpopo River and other related adventure tourism pursuits (Kayamandi Development Services, 2007; Musina Municipality, 2011, 2019; Ramaano, 2021a, 2022a). [Reviews of documents from March 1, 2019, to June 15, 2019 (during 2022 and extends to recently)]

4.3.3 *Routes for new tourist initiatives and improvements to existing organizations, resources and tourism-related activities, prosperity and security in Musina Municipality.* The newly developed tourism and hospitality activities, such as the Tshiphale Park and Resort in “Folovhodwe” Tshiphale, the Vhengani Resort in Folovhodwe Tshaluwi and the De Gebs Resort and Park in Muswodi “Folovhodwe,” offer a fresh breath into local entrepreneurship, integrated rural development and CBT initiatives. However, incorporating suitable historical sites into already existing and current pathways of particular appeal is necessary. Setting priorities has been pivotal for a voyaging route like the Skirmishes. The baobab trees in the Zwigodini and Musina areas, Musina Nature Reserve (which encircles Musina Town), are examples of peculiar interest routes that encourage the inclusion of pertinent natural attractions and heritage. This is significant for both natural and cultural heritage conservation and tourism development. Other instances include the Sand River Gneiss and Sagole mineral deposits, the paintings of the Dambale Bushmen in geological and archaeological exploration excursions and more. In keeping with what was said, support and promote current route operations as well. The Nwanedi Route, Mapungubwe Route, Limpopo Rock Art Route, Mutavhatsindi nature reserve, Footsteps of the Ancestors (including areas of interest around Matavhela and Thengwe areas) and others are examples of the aforementioned undertakings (Kayamandi, 2007; Musina Municipality, 2019). These routes serve as important benchmarks for prospective new tourism projects and events in the study area and supplement current tourism information in the area. To this end, the former Mutale municipality areas of biodiversity and tourism values remain pivotal. Consolidations about the representation of Mapungubwe artifacts in the Interpretation Center or other locations inside the national park have been essential to date. [Document evaluations conducted from March 1 to June 15, 2019; 2022, extends to recently]. Enhancement of the presentations of general data about accessible travel products at the Tourism Information Center. The latter would offer the best potential and reputable amenities for the production and/or sale of arts and crafts, as was the case with the now-burned-out (but the area and building are still under renovations) former Tshilamba tourism information center of the former Mutale Municipality. For the Musina Municipality and the homes that surround it, a strong brand and hallmark are required, aimed at popular tourist attractions like Mapungubwe, among many others. Apart from the aforementioned concepts, the CBNRM and CBT efforts in the research area should be supported by the principles of responsible and sustainable tourism (Munyanyiwa *et al.*, 2019; Ramaano, 2021a, d). In order to draw tourists, it is still essential to use place branding that is focused on tourism and an urban tourism strategy that specifically targets Musina town and the nearby businesses and infrastructure. More lodging facilities must now be constructed in order to effectively and

sufficiently serve Zimbabwe's through traffic. Therefore, it enhances border and urban tourism throughout the region.

Songozwi, Nwanedi Nature Reserve and Resort, Mapungubwe and Pafuri are a few tourist destinations that still need security, infrastructure developments and optimal marketing attention. Inadequate accredited tourist guides and disjointed roads are the main causes of the area's poor tourism safety. There are rumors that site security isn't always available when it's most critical. The difficulties are exacerbated by poachers destroying ventures' fence properties. In addition to poaching, another issue that has not been resolved satisfactorily from a distance is the broken road that connects to the Nwanedi reserve and resort. Similar situations revealed that the persistent issues at Makuleke Game Farm were racism, poaching, bad infrastructure and tribalism (Musina Municipality, IDPs; 2005, 2006, 2011, 2018, 2019; Ramaano, 2021a, b, 2022a). The importance of protecting and conserving natural areas in a way that is economically, socioculturally and ecologically sustainable has been emphasized by international organizations like the Wildlife Conservation Society (WCS), AWF, United Nations Environment Programme (UNEP), Center for Biological Diversity (CBD) and International Union for Conservation of Nature (IUCN). Therefore, ecotourism and pro-poor tourism align with these programs, the Global Environmental Facility (GEF) and the Institute for Environment and Development's (IIED) justification (Ramaano, 2008, 2022a). Overall, the municipality's tourism and conservation initiatives should be in line with those of other ecotourism and heritage destinations in the country, province and surrounding areas, including Fundudzi Lake, Thate Vonde Forest, Tshatshingo Potholes and similar locations. South Africa is home to seven world heritage sites and many tourist destinations. The Garden Route is a picturesque coastal route in South Africa that mostly connects the Eastern Cape Province's Tsitsikamma region with Mossel Bay in the Western Cape Province that add to the country's tourism and biodiversity marvels (Williams, 2013)

5. Broad illations and conclusions

5.1 Theoretical and empirical imports

The results of the study lend credence to the theoretical suggestion that tourism may affect the community directly or indirectly (Olya, 2023). It can therefore establish patterns and serve as a stimulant for additional advancements in the industry. According to Maretti and Salvatore (2012), the idea of sustainable tourism seeks to moderate and balance concerns about intergenerational parity with those of social justice, economic growth and environmental preservation. The general public in Namaqualand was embracing pro-poor tourism and community-based tourism, according to Atkinson (2008). Therefore, people have less authority when land is only used for cultivation. This illustrates the potential of combining agrotourism initiatives with sustainable tourism policies in rural regions (Ciani and Vörös, 2020; Ramaano, 2022a, b). Theoretically, this finding supports the earlier research. Additionally, as the solution for overall sustainability, it is crucial to support both tourism and set-trend nature in the research area and perhaps abroad (Ramaano, 2019, 2021a, b, c, d). In a comparable manner, Muzeza (2013) inquisitively investigates the Great Limpopo Transfrontier Park's (GLTP) and the implications of government institutions. Hence the ability to provide jobs and maintain livelihoods for the surrounding local people, drawing negative conclusions about the empowerment of its inhabitants. The GLTP was recognized as South Africa's bold attempt to pursue its goals of responsible tourism. Similarly, research on local businesses of the Eden District Municipality in the Western Cape Province of South Africa, with an emphasis on interferences in backing small tourism enterprises, was reviewed by Biljohn (2013). According to this type of study, different layouts of possible new tourism firms and their worth to the interests of the local populations are therefore significant and require adequate support from relevant organizations. In reality, implementing the plan might prevent environmental degradation, reduce poverty and promote regional prosperity.

Thus, this study upholds a rationale for the Municipality's tourist management and policy strategies, sustainable tourism development activities and planning systems, the fundamentals

of ecotourism and CBT in developing economies and a pivot for opportunities for the tourism sector to improve livelihoods in the research region.

5.2 Practical, managerial and policy imports

In addition to the previously mentioned turnabout proposals and as earlier indicated, Figure 4 succinctly depicts the study area’s potential theme of sustainable tourism and sustainable community livelihoods. As the figure explains, it presents a compelling argument for the study area’s notable adherence to the goals of sustainable tourism. The figure specifically highlights that policy and regulations and rural and tourism extension support are essential. Hence, through research, awareness campaigns and demonstrations, priorities should be set for regional environmental governance based on sustainable tourism and climate change consciousness (Ramaano, 2025d). The Gauteng, South Africa, is home to the National Institute for the Humanities and Social Sciences (NIHSS) (Inglesi-Lotz and Pouris, 2018).

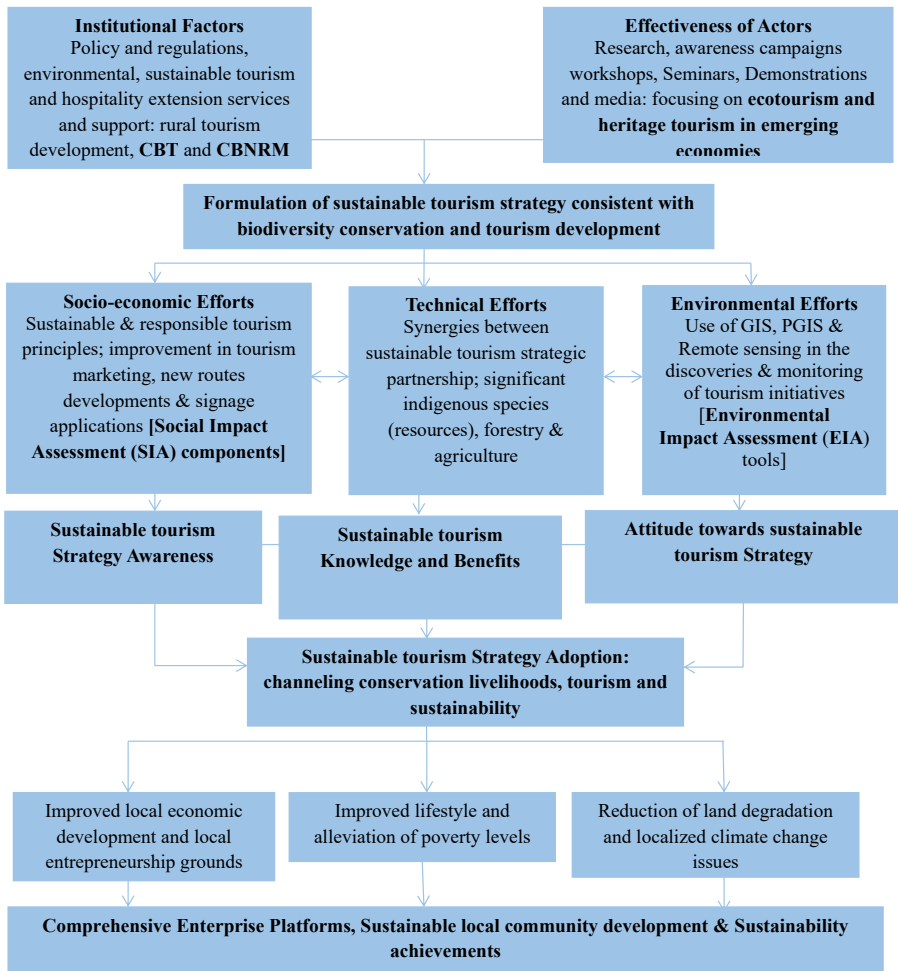


Figure 4. Researcher’s envisaged model of sustainable tourism and sustainable livelihoods in emerging economies through CBT and ecotourism for the study area. **Source:** Author’s own work; adapted from Ramaano (2022a, 2025d)

Social science research is also conducted at the University of Cape Town's Centre for Social Science (CSSR). All of them align with the Sustainable Development Goals of Agenda 2030 and are in line with the Human Sciences Research Council (HSRC), a national and parliamentary research institution, and its oversight efforts. The practicalities, policy implications, integrated rural development initiatives, sustainability, and tourism livelihoods research all depend on this. Formulation of a sustainable tourism strategy anchored in agro-ecotourism, rural tourism, integrated rural development and CBT opens the way for socio-economic efforts and sustainable and responsible tourism integrals. This is possible via the improvement in tourism marketing and new route developments. Technical efforts that prioritize synergies between tourism and strategic rural resource development partnerships, such as forestry and agriculture, are significant. To this end is the influential capacity of diverse GIS applications and remote sensing in the discoveries and monitoring of tourism and land initiatives in environmental efforts. Sustainable tourism strategy adoption should lead to improved local economic development and enhanced entrepreneurship grounds, as well as improved lifestyle and reduction in poverty. This should ultimately lead to the reduction of environmental degradation, land pollution and local climate change issues. However, relevant empowerment and sustainable tourism strategy awareness. Sustainable tourism knowledge and benefits determine the overall attitude toward sustainable tourism strategy adoption and successful sustainability activities in these rural communities. It aligns with the recommendations made by [Masenya \(2021\)](#) regarding the importance of digitally safeguarding cultural heritage and rural communities' sustainable development in South Africa. This further necessitates web-based, integrated heritage management systems in South Africa ([Ramaano, 2024b](#)). [Muriuki and Kenduiywo \(2021\)](#) have asserted the same thing, specifically that the multimedia web GIS interface is crucial for the development of tourism in Kenya's tourism industry. Indeed, a large number of southern African populations depend on natural resources. Ultimately, the tracking and placement of tourism firms might be improved ([Ramaano, 2021d](#)). Despite the preceding "Acts" on tourism, conservation and land use, there are a number of crucial laws that improve local residents' quality of life. That might help change the study area into a more sustainable one. By creating development areas that may serve as hubs for both economic growth and the provision of services, including the creation of jobs, the District Development Model seeks to increase the effect and coherence of government service delivery across the nation. To enhance service delivery in municipalities nationwide, the government is implementing the District Development Model (DDM) ([Khambule, 2021](#)). The process of giving local government authority and responsibility is governed by the Municipal Systems Act. The Local Government: Municipal Systems Act, 2000, was to be amended by the now-repealed Local Government: Municipal Systems Amendment Act 7 of 2011. Political patronage in municipalities is addressed by the Municipal Systems Amendment Act 3 of 2022 in local government ([South Africa, 2000](#); [Shopola and Juta, 2024](#)). For better operations and community welfare, a municipality's performance management system needs to be inherently monitored and reviewed. Thus, the 2001 Municipal Planning and Performance Management Regulations have been under review by the Department of Cooperative Governance (DCOG) ([Peters and Van Nieuwenhuyzen, 2012](#)). The National Development Agency Act 108 of 1998 aims to create a National Development Agency with the mission of fostering a suitable and long-lasting collaboration between civil society organizations and the government in order to overcome poverty and its causes. This aligns with the core principles of livelihoods and environmental management in the NDP Vision 2030; [National Planning Commission \(2013\)](#).

5.3 Key finding, specific highlights, constraints, conclusions, limitations and further studies

5.3.1 Key findings and summarized synthesis. In a nutshell, creating a thorough evaluation of the region's tourism potential, separating the region's status from the local, national and

Southern African tourism settings, splitting the region's opportunities to boost it, recognizing and implying the latent role of each tourism hot spot in the context of the entire location and determining the region's optimal potential are still necessary for an achievable model for tourism development. Thus, in addition to surveys and interviews, this study concentrated on reviewing specific and relevant materials about topics related to the growth of tourism in Musina Municipality, such as the creation of creative tourism routes. The targeted attention was to be directed mostly toward the study area's existing potential tourist routes and tourism development initiatives, namely its plans and management strategies. According to [Ramaano \(2021b\)](#), although possessing an aspired vision, the research region showed glimpses of failures in the successful implementation of a tourism development strategy that would incorporate tourism into the intended management of natural resources and community empowerment. One example of this is the Big Tree Nature Reserve Conservation and Community Development Project. The study complied with all of its specifications by closely reviewing the IDP and LED system documentation for Musina Municipality. With a focus on the companies that promote tourism, from Musina Town to the surrounding local villages, it emphasized the effects of tourism, both historical and contemporary. In order to coordinate the integration of the tourist routes surrounding Musina Town with other tourist routes, the aforementioned was very crucial. Therefore, this would be the best approach to help a prospective tourism plan. The combined effort of local communities and governmental and non-governmental organizations that deal with rural and sustainable tourism was consistently supported by the data collected, applying every means of recuperation as an appealing prospect for future optimized tourism projects within the study area. This is because tourism can improve the local economy in the study area. Thus, neither compelling evidence nor a turnaround strategy centered on sustainable tourism activities within the local communities and traditional leaders was discovered by [Ramaano \(2021a, 2023a\)](#).

5.3.2 Specific highlights of potentiality and constraints. As shown within the methodology, all the selected villages are situated adjacent to protected areas such as Nwanedi Nature Reserve, the Big Tree Nature Reserve and Tshipale Park and Resort, among others. To a certain extent, they are abutting areas like Tshipise Forever Resort and Musina Nature Reserve. There are both natural and cultural heritage (*cultural capital*) and natural biodiversity and forestry (*natural capital*) endowments. This serves as a potential advantage for ecotourism activities and CBT-based entrepreneurship and advances livelihoods and supports STLA. The area is solely occupied by Venda ethnic groups, except for the town where there is a slight mixture of Sotho, Pedi, Zimbabweans and whites. This makes the study area and selected communities fit for not only ecotourism but also ethnic and cultural heritage tourism. It also marks the special contribution of this study and its sustainable livelihood envisioned model. Musina itself is a gateway town to several conserved areas and tourism destinations in the vicinity. To a certain extent, the presence of the MNP and Pafuri Gate of KNP enhances tourism development potentials for these villages collectively. The tourism, hospitality, conservation, ecotourism and CBT-related highlights of Gumela village are Nwanedi Nature Reserve and Resorts and Luphephe and Nwanedi Dams. However, for Folovhodwe, in addition to the above, there are the Tshipale Park and Resort, Vhengani Resorts, Tshipako Guest House, Community Irrigated Agricultural Scheme, Degeb's Park and Resort and Tshipise Forever Resort. Moreover, being situated on the main road to the town offers better opportunities for various tourism-related enterprises. While both Zwigodini and Tshipise village are opportune by the Big Tree Nature Reserve, Beria Madzonga Resort, the Big Tree Holiday Lodge, Manalani Lodge, Dambale Bushmen Rock Art Paintings, Sagole Spa, the mountain biodiversity within Dambale, Mukununde and Domboni and the geological research of essential rocks, including the Domboni caves.

When all is working according to the plans, along with better communication (*social capital*) with the abutting conservation and hospitality management, influential authorities, capacity building and community development programs. There can be platforms for various merchandises, such as art crafts, pottery and traditional basket making (*cultural and*

economic capital); tour guides and hospitality administrators and lodge workers (*human capital*); improved road facilities (*physical capital*); and improved forest (*natural capital*) management. To this end, the overall household goods and home buildings (*built capital*) and partnerships and investments (*financial capital*) are for local development and the improvement of communities' education and sustenance skills (*human capital*). There are, however, challenges faced by all the villages. Gumela village is situated in the remotest area with poor road and transport facilities. As with the results, all villages suffer from a potential and actual lack of sustainability and biodiversity management skills and a deficiency of empowerment activities from adjacent conservation and tourism entities. This is a two-way process that needs active commitments from all parties. The seeming lack of supporting grounds, capacity building, effective development trust and proper grading poses a challenge for the Zwigodini Madifha Big Tree Project. Tshipise and Sagole spa rejuvenation hopes are dwindled by a lack of proper community participation, tourism-conscious CBOs, dedication and trustworthiness in handling or accumulating finances targeted toward saving the property. Excessive land claims around Folovhodwe village and Nwanedi Nature Reserve can bring confusion and dichotomy, tarnishing ecotourism and CBT and integrated rural development ambitions. Nonetheless, the Tshiphale Park around Folovhodwe has gained from the restitution claims for tourism development and resort establishment. Similarly, by modifying several laws overseen by the Minister of Rural Development and Land Reform, the Rural Development and Land Reform General Amendment Act 4 of 2011 aims to improve livelihoods generally (Pienaar, 2014). Along with the tourism "act" and "agency" and SANParks' socio-economic-transformation and land-claims rationales, improved capacity building, community involvement, and CBOs livelihood initiatives can offer a resolution platform and better rural livelihood outcomes in the region. Together with deeds of the Limpopo's Co-operative Governance, Human Settlements and Traditional Affairs (CoGHSTA), SANParks' Vision 2040 and the Musina Makhado Special Economic Zone (MMSEZ)'s overall significance and maximum applicability in the area are pivotal. As a result, local populations' perceptions, advantages and awareness of sustainable tourism all influence their support for a sustainable tourism plan.

5.3.3 Conclusions limitations and further studies. It was generally accepted that a viable tourism development strategy was essential. Among other things, a Southern African framework for protected areas and rural tourism, such as the South African government's Rural Tourism Strategy, promotes ecotourism development, CBT, community participation, grassroots movement, and ownership. It emphasizes sustainable development that benefits the environment and local communities (Briedenhann and Wickens, 2004; Fairer-Wessels, 2017; Ramaano, 2025a, c). The abundance of natural and cultural resources in the research area will be the main focus of the approach (Chiesura and De Groot, 2003). It would be essential to the self-sufficiency of communities. The survey found that, among other reasons, adventure, culture, ethnicity and ecotourism make more sense when traveling to rural areas. The study has increased the possibility of incorporating tourism into the sustainable growth of local communities in the area under investigation. In particular, the outcomes and suggestions have produced a climate and platform that are conducive to this type of approach. Both locally and abroad, research has been done on the connection between tourism and local economies. However, they are still unable to completely comprehend the significance of eco-friendly and responsible tourism as a stand-in approach to meeting the mandate for sustainable tourism, the issues with the incompatible organization, the reluctance of stakeholders and the absence of pertinent knowledge and community involvement (Hatipoglu *et al.*, 2016; Ramaano, 2024b). The study's cross-tabulation analysis strategy, single Microsoft Excel method and small sample size are its main drawbacks. Despite this, the credibility and essence of the results remained intact. Nevertheless, additional research may be required to investigate the same subject utilizing a suitable and sophisticated approach of a more quantitative, inferential and explanatory nature. Along with social exchange and stakeholder engagement theory's full application, further studies can use different approaches, such as the motivation, opportunity

and ability framework in tandem with the deepened sustainable livelihood and sustainability transition approaches to enhance their findings on socioeconomic activities.

Notes

1. <https://www.sanbi.org>) News Room
2. South African National Parks' socio-economic transformation and land claims programmes

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