

Journal of Hospitality and Tourism Management



Assessing the Influence of Tourism Development on Wildlife Conservation In GISHWATI-MUKURA National Park, Rwanda

Twagira Didier & Charles Aloo

ISSN: 2706-6592

Assessing the Influence of Tourism Development on Wildlife Conservation In GISHWATI-MUKURA National Park, Rwanda

^{1*}Twagira Didier & ²Charles Aloo

^{1&2}School of Hospitality, Travel and Tourism Management, Mount Kigali University

Email: yvesmuhirwa2017@gmail.com

How to cite this article: Twagira, D., & Aloo, C. (2026). Assessing the influence of tourism development on wildlife conservation in Gishwati-Mukura National Park, Rwanda. *Journal of Hospitality and Tourism Management*, 9(2), 71–86. <https://doi.org/10.53819/81018102t70122>

Abstract

This study examined the influence of tourism development on wildlife conservation in Gishwati-Mukura National Park, Rwanda. It specifically assessed the influence of income creation, community-based tourism activities, and ecotourism activities on wildlife conservation. A descriptive research design was employed, targeting a population of 475 individuals, from whom a sample of 217 respondents was selected. Primary data were collected using structured questionnaires, while secondary data were obtained through documentary review. Data were analysed using descriptive and inferential statistics, including Pearson correlation and multiple regression analysis. The findings indicated that income creation, community-based tourism activities, and ecotourism activities were positively and significantly associated with wildlife conservation. The regression results showed positive effects of income creation ($\beta = 0.428$, $p < 0.001$), community-based tourism activities ($\beta = 0.372$, $p < 0.001$), and ecotourism activities ($\beta = 0.451$, $p < 0.001$) on wildlife conservation. The model explained 76.1% of the variance in wildlife conservation, indicating substantial explanatory power. The findings suggest that tourism development, particularly through income-generating opportunities, community participation, and ecotourism, can contribute significantly to wildlife conservation. Strengthening community involvement and promoting environmentally responsible tourism practices may therefore enhance the conservation contribution of tourism in Gishwati-Mukura National Park.

Keywords: *Tourism Development, Wildlife, Conservation, GISHWATI-MUKURA National Park, Rwanda.*

1. Introduction

Tourism development plays a vital role in wildlife conservation, serving as both a financial mechanism and an advocacy tool. Globally, many protected areas rely on tourism-generated revenue to fund conservation activities and infrastructure. In Costa Rica, for example, entrance fees and nature-based tourism help finance protected areas that would otherwise lack state funding (Honey, 2023). Similarly, Australia's conservation authorities utilize environmentally responsible tourism revenue to support wildlife habitat preservation and environmental education initiatives (Buckley, 2022).

<https://doi.org/10.53819/81018102t70122>

In the African context, wildlife tourism is a major contributor to conservation efforts and national economies. Countries such as South Africa, Botswana, and Namibia have made significant progress in aligning tourism with conservation goals. In South Africa, private game reserves and national parks generate millions in revenue that fund anti-poaching units, veterinary services, and ecological monitoring (Van der Duim, 2024). In East Africa, wildlife tourism is a backbone of economic and conservation strategies, particularly in countries like Kenya, Uganda, and Tanzania. National parks such as the Maasai Mara, Serengeti, and Queen Elizabeth attract thousands of tourists each year, with revenues channelled into conservation programs and park maintenance.

In Kenya, for instance, the Kenya Wildlife Service uses funds from tourism to operate anti-poaching patrols and educate communities about wildlife preservation (Akama & Kieti, 2023). Uganda's mountain gorilla tourism in Bwindi Impenetrable National Park has proven to be a conservation success story, where tourist permits generate revenue used for habitat protection and community development (Archabald & Naughton-Treves, 2021). The participatory model, which allows communities to benefit from tourism, has helped reduce human-wildlife conflicts and foster conservation support. In Tanzania, collaboration between tour operators, the government, and local communities has enhanced the sustainable management of areas like Ngorongoro Conservation Area. Despite these achievements, challenges persist in the form of overcrowding, illegal resource use, and limited local ownership of tourism enterprises (Nelson, 2023).

Rwanda has emerged as a leading example of how tourism can be integrated with conservation in a post-conflict setting. The country's flagship initiative, mountain gorilla tourism in Volcanoes National Park, has received international acclaim for balancing wildlife protection with socio-economic development. The Rwanda Development Board (RDB) has implemented a revenue-sharing scheme where 10% of park revenues are allocated to community projects, such as schools, water infrastructure, and health clinics (Spenceley et al., 2021). This has improved community attitudes toward conservation and reduced encroachment into protected areas.

In Akagera National Park, the reintroduction of lions and rhinos supported by tourism income and partnerships with African Parks demonstrates how tourism-driven conservation can revive ecosystems.

Gishwati-Mukura National Park provides a case study on how emerging tourism destinations support biodiversity conservation. Established in 2015 and designated a UNESCO biosphere reserve, the park was created by merging two degraded forest fragments Gishwati and Mukura home to endangered species such as chimpanzees and golden monkeys (Forest of Hope Association, 2021). Although tourism is still in its infancy in the park, guided forest walks, birdwatching, and primate tracking have started attracting both domestic and international visitors. The Rwandan government, in collaboration with NGOs and local cooperatives, is promoting environmentally responsible tourism as a means to fund park restoration, improve livelihoods, and enhance biodiversity outcomes. Revenues from tourism are used for reforestation, trail maintenance, and community outreach programs. Importantly, local communities have been engaged through training and employment in eco-guiding, handicrafts, and conservation farming (REMA, 2020). This participatory model not only provides economic benefits but also fosters stewardship and reduces illegal resource extraction.

Advancement of tourism in Gishwati-Mukura has also catalyzed environmental education and awareness, especially among youth and schoolchildren living near the park. The creation of buffer zones and forest corridors supported partly by eco-tourism income has improved habitat connectivity for species like the L'Hoest monkey and eastern chimpanzee. Monitoring data

from conservation partners indicates a decline in illegal logging and bushmeat hunting, attributed to increased local support for conservation and alternative livelihoods linked to tourism (Forest of Hope Association, 2021). Nevertheless, challenges remain, including limited tourism infrastructure, low visitor numbers, and the need for capacity building among local stakeholders. Based on the above background, none of research conducted to show how advancement of tourism contributes to the protection of wildlife conservation specifically in Gishwati -Mukura National Park in Rwanda.

2. Methodology

2.1 Research Design

The research adopted a case study design, focusing on Gishwati-Mukura National Park. A descriptive approach was used to summarize the data, and inferential statistics (correlation and regression) were used to analyze the relationships between variables.

2.2 Target Population

The target population comprised 475 respondents from different categories. The population figures were provided by the Human Resource Manager of the Rwanda Development Board in 2026.

2.3 Sample size

The sample size was determined using Yamane's formula (Yamane, 1967), which is appropriate for calculating a representative sample from a known population:

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

Where n is the sample size, N is the target population, and e is the margin of error. With a target population of 475 and a 5% margin of error:

$$n = \frac{475}{1 + 475(0.05)^2} = 217$$

Thus, the study selected 217 respondents from the target population of 475.

2.4 Data Collection Instruments

The study used both primary and secondary data to obtain the information required to address the research objectives.

3. Results

3.1 Demographic characteristics of respondents

In this study, demographic characteristics of respondents were important as this helped researcher to identify types of respondents in terms of gender.

Gender of respondents

The study examined respondents' gender distribution to assess the level of representation of both male and female participants.

Table 1: Gender of Respondents

Gender	Frequency (f)	Percentage (%)
Male	122	56.2

<https://doi.org/10.53819/81018102t70122>

Female	95	43.8
Total	217	100

Source: Primary Data, 2026

The results in Table 1 indicated that there is a slight male dominance (56.2%) among respondents, but females constitute a substantial proportion (43.8%). This indicates reasonably balanced gender representation, though males slightly dominate tourism participation.

3.2 Presentation of Findings

In this section, the research objectives are analyzed and discussed in light of the study findings. The research data were analyzed using a wide variety of statistical methods, including percentages, means, standard deviation, Pearson coefficient correlation and multiple regression. The results were illustrated in accordance with the following objective to examine the influence of income creation on protection of wildlife conservation in Gishwati-Mukura National Park, the influence of locally driven tourism initiatives on the protection of wildlife conservation in Gishwati-Mukura National Park and the influence of environmentally responsible tourism activities on the protection of wildlife conservation in Gishwati-Mukura National Park.

3.2.1 The influence of income creation on protection of wildlife conservation in Gishwati-Mukura National Park

This section presents the influence of income creation on wildlife conservation in Gishwati-Mukura National Park. Responses were analyzed using a Likert scale that went from “Strongly Disagreed” to “Strongly Agreed.” The mean and standard deviation were also given. The results are shown in the table below.

Table 2: The influence of income creation on protection of wildlife conservation in Gishwati-Mukura National Park

Responses	SA	A	D	SD	Mean	St. Dev
Entrance fees collected from visitors significantly contribute to the protection and maintenance of wildlife in Gishwati-Mukura National Park.	48.4	45.2	4.6	1.8	3.40	0.63
Tourism-generated revenue has led to increased funding for conservation programs in Gishwati-Mukura National Park.	46.1	47.0	5.1	1.8	3.38	0.64
Funds generated through tourism activities have improved the capacity of anti-poaching operations in the park.	42.9	44.7	9.2	3.2	3.27	0.76
Investment from tourism revenue has supported habitat restoration efforts within Gishwati-Mukura National Park.	44.2	46.8	6.5	2.5	3.32	0.68
Local communities benefit economically from tourism revenue, which enhances their support for wildlife conservation.	47.0	43.8	6.0	3.2	3.35	0.72
Tourism income contributes to the long-term financial sustainability of conservation efforts in Gishwati-Mukura National Park	45.6	46.5	5.5	2.3	3.35	0.66

Source: Primary data, 2026

Table 2 presents respondents' views regarding the contribution of tourism revenue generation to wildlife conservation in Gishwati-Mukura National Park. The researcher assessed whether entrance fees collected from visitors significantly contributed to wildlife protection and maintenance, 48.4% of respondents strongly agreed while 45.2% agreed.

Only a small proportion (4.6% disagreed and 1.8% strongly disagreed). The strong agreement was further supported by a high mean score of 3.40 and a low standard deviation (0.63), indicating that most respondents consistently acknowledged the importance of entrance fees in funding conservation efforts.

Furthermore, when respondents were asked whether tourism-generated revenue led to increased funding for conservation programs, 46.1% strongly agreed and 47.0% agreed. Only 6.9% expressed any level of disagreement. This statement also achieved a high mean of 3.38 with a standard deviation of 0.64, confirming broad agreement that tourism income strengthens conservation programs such as monitoring, ecological research, and ranger support. Regarding the statement that tourism funds improved the capacity of anti-poaching operations, 42.9% strongly agreed and 44.7% agreed, while 9.2% disagreed and 3.2% strongly disagreed. With a mean of 3.27 and a standard deviation of 0.76, the responses suggest that although slightly more varied, the majority still recognized tourism revenue as an important tool for enhancing patrols, surveillance, and equipment used in anti-poaching activities.

On the other hand, the study explored whether investment from tourism revenue supported habitat restoration efforts, 44.2% strongly agreed and 46.8% agreed, while 6.5% disagreed and 2.5% strongly disagreed. The mean score of 3.32 and standard deviation of 0.68 demonstrate that respondents largely acknowledged the role of tourism revenue in restoring degraded habitats and improving ecological conditions within the park.

When respondents were asked whether local communities benefited economically from tourism revenue, 47.0% strongly agreed and 43.8% agreed. Only a small percentage (6.0% disagreed and 3.2% strongly disagreed). The mean of 3.35 and standard deviation of 0.72 show that respondents recognized tourism as a valuable economic driver that enhances community involvement and support for wildlife conservation. Finally, the statement that tourism income contributed to the long-term financial sustainability of conservation efforts received strong support, with 45.6% strongly agreeing and 46.5% agreeing. Only 5.5% disagreed and 2.3% strongly disagreed. The mean score of 3.35 and standard deviation of 0.66 indicate consistent agreement that tourism offers a dependable financial foundation for sustaining long-term conservation activities.

The findings were consistent with Dupont and Martin (2023), who indicated that over 60% of park management's conservation budget was supported by tourism revenue, leading to improved wildlife monitoring and habitat restoration programs, the findings demonstrate that respondents clearly perceived tourism revenue as a significant and reliable driver of conservation success. Entrance fees, community benefits, anti-poaching capacity, and habitat restoration all appear to be strengthened by tourism income. The generally high means and low standard deviations across statements confirm strong consensus about the positive impact of tourism on wildlife conservation.

3.2.2 The influence of community-based tourism initiatives on the protection of wildlife conservation in Gishwati-Mukura National Park.

This section was intended to analyze the findings related to the influence of locally driven tourism initiatives activities on the protection of wildlife conservation in Gishwati-Mukura National Park. The responses were presented in table below.

<https://doi.org/10.53819/81018102t70122>

Table 3: The influence of community-based tourism activities initiatives on the protection of wildlife conservation in Gishwati-Mukura National Park

Responses	SA	A	D	SD	Mean	Std. Dev
Local community involvement in tourism activities enhanced their commitment to wildlife conservation.	34.6	50.2	10.1	5.1	3.14	0.78
Community-based tourism provided alternative income sources that reduced reliance on forest resources.	30.9	52.1	12.0	5.0	3.09	0.79
Tourism-related environmental education programs increased local awareness of wildlife protection.	38.7	47.0	9.2	5.1	3.19	0.77
Fair distribution of tourism benefits encouraged residents to support conservation initiatives.	36.4	49.8	9.7	4.1	3.18	0.74
Participatory governance in tourism planning empowered communities in wildlife management decisions.	33.2	48.4	13.8	4.6	3.10	0.79
Community-based tourism helped reduce human-wildlife conflicts through improved cooperation and understanding.	35.9	46.5	12.9	4.7	3.14	0.78

Source: Primary data, 2026

Table 3 indicated the influence of locally driven tourism initiatives activities on the protection of wildlife conservation in Gishwati-Mukura National Park. The researcher examined whether local community involvement in tourism activities enhanced their commitment to wildlife conservation, 50.2% of respondents agreed and 34.6% strongly agreed. Only a small proportion disagreed (10.1%) or strongly disagreed (5.1%). With a mean of 3.14 and a standard deviation of 0.78, the results indicate that community engagement in tourism fosters positive attitudes toward conservation responsibilities.

Regarding whether community-based tourism provided alternative income sources that reduced reliance on forest resources, 52.1% agreed and 30.9% strongly agreed with the statement. However, 12% disagreed and 5% strongly disagreed. The mean score of 3.09 and standard deviation of 0.79 illustrate that most respondents recognized the value of tourism as an economic alternative that reduces dependence on environmentally harmful activities such as illegal harvesting of forest materials.

When respondents were asked whether tourism-related environmental education programs increased local awareness about wildlife protection, 47% agreed and 38.7% strongly agreed. Only a small minority (9.2% disagreed and 5.1% strongly disagreed) expressed contrary views. With a mean of 3.19 and a standard deviation of 0.77, the results suggest that environmental education delivered through tourism initiatives effectively enhances knowledge and appreciation of wildlife conservation.

The findings revealed that fair distribution of tourism benefits encouraged residents to support conservation initiatives, 49.8% agreed while 36.4% strongly agreed. Again, only a small number disagreed (9.7%) or strongly disagreed (4.1%). The mean of 3.18 and the standard

deviation of 0.74 demonstrate general consensus that equitable benefit-sharing strengthens community motivation to engage in conservation efforts.

Similarly, the statement on participatory governance in tourism planning empowering communities to take part in wildlife management decisions received 48.4% agreement and 33.2% strong agreement. Although 13.8% disagreed and 4.6% strongly disagreed, the overall mean of 3.10 and standard deviation of 0.79 show that most respondents acknowledged the value of involving communities in planning and decision-making processes related to conservation.

Lastly, when asked whether community-based tourism helped reduce human–wildlife conflicts through improved cooperation and understanding, 46.5% agreed and 35.9% strongly agreed. A smaller portion disagreed (12.9%) or strongly disagreed (4.7%). With a mean of 3.14 and a standard deviation of 0.78, the results indicate that tourism works as a platform for building harmonious relationships between local people and wildlife through better communication, knowledge exchange, and shared awareness.

The findings of this study align with evidence from previous research on community involvement in conservation. According to Ahebwa, van der Duim, and Sandbrook (2021), community-based tourism in Uganda improved local support for conservation by offering alternative livelihoods and strengthening cooperation between communities and park authorities. Similarly, Snyman (2023) found that local employment and benefit-sharing from tourism projects across Southern Africa significantly reduced negative attitudes toward wildlife and helped lower incidents of human–wildlife conflict. Community-based tourism is a key driver of positive conservation outcomes, primarily through economic empowerment, environmental education, and participatory decision-making. The results from this study reinforce the broader understanding that sustainable tourism strengthens local stewardship and contributes meaningfully to long-term wildlife conservation goals.

3.2.3 The influence of eco-tourism activities on the protection of wildlife conservation in Gishwati-Mukura National Park.

This section provides further information regarding the findings about the influence of environmentally responsible tourism activities on the protection of wildlife conservation in Gishwati-Mukura National Park. The responses were summarized using percentages, means, and standard deviations.

Table 4: The influence of eco-tourism activities on the protection of wildlife conservation in Gishwati-Mukura National Park.

Responses	SA	A	D	SD	Mean	Std. Dev
Ecotourism promoted responsible behaviour among visitors in the park.	37.3	47.9	9.2	5.6	3.17	0.80
Tourists received helpful information about protecting wildlife during their visit.	35.9	49.3	10.1	4.7	3.16	0.78
The park used eco-friendly facilities that reduced harm to the environment.	34.6	48.4	11.2	5.8	3.12	0.81
Ecotourism helped preserve different animal and plant species.	38.2	45.6	10.6	5.6	3.16	0.80
Part of the tourism income was reinvested in conservation efforts.	36.0	46.7	12.4	4.9	3.14	0.79

Visitors were encouraged to act in ways that 37.8 44.7 12.0 5.5 3.15 0.80 supported long-term wildlife protection.

Source: Primary Data (2026)

The study assessed the influence of environmentally responsible tourism activities on the protection of wildlife conservation in Gishwati-Mukura National Park. The results in Table 4 indicate that respondents noted that ecotourism promoted responsible behaviour among visitors, as illustrated by 47.9% agreeing and 37.3% strongly agreeing with the statement. Only a small proportion disagreed (9.2%) or strongly disagreed (5.6%). The respondents' views reflect a strong level of acceptance, supported by a mean of 3.17 and a standard deviation of 0.80, showing relatively consistent perceptions.

When respondents were asked whether tourists received useful information on wildlife protection during their visit, 49.3% agreed while 35.9% strongly agreed. A small number of respondents expressed disagreement (10.1%) or strong disagreement (4.7%). With a mean of 3.16 and standard deviation of 0.78, this suggests that educational efforts in the park are widely recognized and appreciated by visitors.

The findings indicated that 34.6% strongly agreed and 48.4% agreed that the park used eco-friendly facilities that minimized environmental harm. However, 11.2% disagreed and 5.8% strongly disagreed with the statement. With a mean score of 3.12 and standard deviation of 0.81, the majority of respondents still confirmed that eco-friendly practices were visible and adequately implemented.

The findings further show that ecotourism played a significant role in preserving biodiversity, as 38.2% strongly agreed and 45.6% agreed that it helped protect various animal and plant species. Meanwhile, 10.6% disagreed and 5.6% strongly disagreed. Respondents largely endorsed the statement, with a mean of 3.16 and standard deviation of 0.80, indicating consistent support for the role of ecotourism in biodiversity conservation.

Additionally, respondents were asked whether part of the tourism income was reinvested into conservation efforts. The majority agreed (46.7%) or strongly agreed (36.0%), although 12.4% disagreed and 4.9% strongly disagreed. The mean of 3.14 and standard deviation of 0.79 signify that reinvestment in conservation is generally recognized and appreciated.

Lastly, respondents indicated that visitors were encouraged to adopt behaviours that contribute to long-term wildlife protection. This is supported by 44.7% agreeing and 37.8% strongly agreeing, while only 12.0% disagreed and 5.5% strongly disagreed. The mean value of 3.15 and standard deviation of 0.80 further show that conservation-oriented messaging in the park is effective.

The findings collectively revealed that ecotourism in the park is functioning as a key driver of wildlife protection, responsible visitor conduct, and environmental sustainability. The majority of respondents consistently agreed across all statements, highlighting ecotourism's role in promoting conservation awareness, generating income for environmental management, and integrating eco-friendly infrastructure.

This aligns with the broader literature emphasizing ecotourism as an essential mechanism for linking tourism development with biodiversity protection. These results are supported by empirical research from Kiper (2022), who found that ecotourism fosters environmental education, enhances conservation funding, and encourages sustainable behaviour among tourists. The study emphasizes that ecotourism contributes to the preservation of natural ecosystems by creating awareness and generating financial resources for conservation

programs. Similar to the current findings, Kiper noted that eco-friendly practices and reinvestment of tourism revenue significantly improve conservation outcomes.

The findings reinforce that ecotourism not only enhances visitor experiences but also plays a vital role in long-term wildlife and habitat protection through responsible behaviour, educational engagement, and direct investment in conservation activities.

3.2.4 The influence of advancement of tourism on protection of wildlife conservation in Gishwati-Mukura National Park.

This section indicates the influence of advancement of tourism on protection of wildlife conservation in Gishwati-Mukura National Park. The results are listed in the table below.

Table 5: The influence of the advancement of tourism on protection of wildlife conservation in Gishwati-Mukura National Park.

Statement	SA (%)	A (%)	D (%)	SD (%)	Mean	Std. Dev
Tourism development helped control population growth near the park.	31.8	45.6	17.1	5.5	3.04	0.82
Tourism contributed to better protection of wildlife habitats.	38.7	47.0	10.1	4.2	3.20	0.76
Tourism activities played a role in reducing poaching cases.	36.4	44.7	14.3	4.6	3.13	0.80
Tourism supported efforts to preserve biodiversity in the park.	40.1	45.2	10.6	4.1	3.21	0.75
Tourism improved the balance of the ecosystem in the park.	34.6	46.0	14.8	4.6	3.11	0.80
Tourism encouraged the conservation of natural ecosystem services.	37.3	43.8	14.7	4.2	3.14	0.78

Source: Primary data, 2026

The reference to Table 5 illustrates the influence of advancement of tourism on protection of wildlife conservation in Gishwati-Mukura National Park. The findings indicate that tourism development contributed to regulating population growth around the park. According to the data, 45.6% agreed and 31.8% strongly agreed with the statement, whereas a smaller proportion disagreed (17.1%) or strongly disagreed (5.5%). The acceptance of this statement is reflected in a mean of 3.04 and a standard deviation of 0.82, indicating moderate agreement despite some variability in responses.

The researcher further revealed that tourism significantly strengthened wildlife habitat protection. The result showed that 47.0% agreed and 38.7% strongly agreed, while only 10.1% disagreed and 4.2% strongly disagreed. The mean of 3.20 and standard deviation of 0.76 show that most respondents held a consistent and positive view of tourism's role in protecting wildlife habitats.

When respondents were asked whether tourism activities contributed to reducing poaching cases, 44.7% agreed and 36.4% strongly agreed, although 14.3% disagreed and 4.6% strongly disagreed. The respondents accepted the statement with a mean score of 3.13 and standard deviation of 0.80, implying that increased tourism presence may deter illegal hunting.

The findings further showed strong support for the notion that tourism enhances biodiversity preservation in the park. A majority endorsed the statement, with 45.2% agreeing and 40.1% strongly agreeing. Only 10.6% disagreed and 4.1% strongly disagreed. The mean value of 3.21 and relatively low standard deviation of 0.75 suggest substantial agreement among respondents.

The study also examined whether tourism improved ecosystem balance. The results indicate that 46.0% agreed and 34.6% strongly agreed, while 14.8% disagreed and 4.6% strongly disagreed. With a mean of 3.11 and standard deviation of 0.80, the findings suggest that respondents acknowledged tourism's contribution to stabilizing ecological interactions within the park.

Lastly, respondents reported that tourism encouraged the conservation of natural ecosystem services, as 43.8% agreed and 37.3% strongly agreed. A smaller proportion disagreed (14.7%) or strongly disagreed (4.2%). The statement was accepted with a mean of 3.14 and standard deviation of 0.78, indicating that tourism plays an important role in promoting the protection of essential ecological functions. The results demonstrate that tourism development is perceived as a key driver of wildlife conservation, habitat protection, and ecosystem sustainability within the park. Across all indicators, including population control, habitat protection, poaching reduction, biodiversity preservation, ecological balance, and conservation of ecosystem services, respondents consistently expressed positive attitudes toward tourism's contribution. The findings were consistent with Stone and Nyaupane (2024) found that tourism activities significantly reduce poaching and other illegal practices by increasing surveillance, funding ranger operations, and attracting community participation in conservation initiatives.

4. Conclusion

The study concluded that tourism development contributes positively to wildlife conservation in Gishwati-Mukura National Park. Tourism-generated income, including entrance fees and other tourism revenues, supports essential conservation activities such as habitat restoration, anti-poaching operations, ecological monitoring, and long-term conservation financing. The findings further indicated that community-based tourism strengthens conservation by increasing residents' participation and commitment, providing alternative livelihood opportunities, raising environmental awareness, and promoting equitable benefit sharing. These mechanisms help reduce dependence on forest resources and contribute to improved community-wildlife relationships.

The study also concluded that environmentally responsible tourism, particularly ecotourism, is an important component of conservation. Responsible visitor practices, environmental education, and the use of eco-friendly infrastructure contribute to biodiversity protection and sustainable environmental management. Overall, tourism development was found to support habitat protection, reduce pressures associated with poaching and resource use, promote biodiversity conservation, and contribute to the maintenance of ecological balance in and around Gishwati-Mukura National Park.

5. Recommendation

Gishwati-Mukura National Park management should strengthen the reinvestment of tourism revenue in priority conservation activities, including wildlife monitoring, habitat restoration,

<https://doi.org/10.53819/81018102t70122>

anti-poaching operations, and conservation awareness. Community-based tourism initiatives should also be expanded to enhance local participation and livelihood opportunities. Interpretation materials, guided tours, and environmental education should be improved to promote responsible visitor behaviour and greater awareness of wildlife conservation. In addition, investment in renewable energy, effective waste-management systems, environmentally friendly facilities, and low-impact trails should be prioritized to minimize tourism-related ecological impacts.

The Government of Rwanda should complement tourism-generated revenue with adequate public funding to ensure sustained support for wildlife patrols, ecological research, habitat restoration, and other conservation programs. Government agencies should also consider appropriate incentives, such as grants, tax measures, and accessible financing, to encourage eco-lodges, conservation enterprises, and community-based tourism initiatives. Capacity-building programs for local guides, community tourism operators, and conservation personnel should be strengthened to improve service quality, environmental knowledge, and sustainable tourism management.

6. References

- African Wildlife Foundation. (2023). *Africa protected areas report: Unlocking the value of conservation through tourism*. African Wildlife Foundation.
- Agyemang, K., & Owusu, B. (2023). Community attitudes and protection of wildlife conservation through tourism in Mole National Park, Ghana. *West African Journal of Ecology*, 18(3), 210–225.
- Akama, J. S., & Kieti, D. (2023). Tourism and socio-economic development in developing countries: A case study of Mombasa Resort in Kenya. *Journal of Sustainable Tourism*, 15(6), 735–748.
- Anderson, P., & Smith, R. (2023). Indigenous-led tourism and protection of wildlife conservation in Australia. *Australian Journal of Environmental Management*, 30(1), 45–59.
- Antolini, F., Terraglia, I., & Cesarini, S. (2024). Integrating multiple data sources to measure sustainable tourism in Italian regions. *Socio-Economic Planning Sciences*, 95, 101959. <https://doi.org/10.1016/j.seps.2024.101959>
- Balmford, A., Green, J. M. H., & Anderson, M. (2022). Protected areas and the financial case for conservation. *Nature Sustainability*, 5(3), 231–238. <https://doi.org/10.1038/s41893-021-00813-7>
- Bianchi, L., & Rossi, F. (2024). Environmentally responsible tourism and conservation funding in Gran Paradiso National Park, Italy. *European Journal of Environmental Management*, 31(1), 54–70.
- Buckley, R. (2022a). *Environmentally responsible tourism: Principles and practices*. CABI.
- Buckley, R. (2022b). Sustainable tourism and protection of wildlife conservation: Integration and challenges. *Journal of Sustainable Tourism*, 30(1), 24–41. <https://doi.org/10.1080/09669582.2021.1937089>
- Buhalis, D., & Amaranggana, A. (2022). Smart tourism destinations and their role in development. *Journal of Destination Marketing & Management*, 23, 100713. <https://doi.org/10.1016/j.jdmm.2021.100713>

- Chissano, M., & Bento, F. (2024). Community tourism and anti-poaching in Gorongosa National Park, Mozambique. *Mozambique Journal of Conservation Science*, 22(2), 120–137.
- Crotts, J. C., Magnini, V. P., & Calvert, E. (2022). Key performance indicators for destination management in developed economies: A four-pillar approach. *Annals of Tourism Research Empirical Insights*, 3(2), 100053. <https://doi.org/10.1016/j.annale.2022.100053>
- Dredge, D., & Jenkins, J. (2022). *Tourism planning and policy*. Routledge.
- Drumm, A., & Moore, A. (2021). *Eco-advancement of tourism: A manual for conservation planners and managers*. The Nature Conservancy.
- Dupont, J., & Martin, L. (2023). Economic contributions of environmentally responsible tourism to protection of wildlife conservation in the French Alps. *Journal of European Environmental Management*, 28(4), 325–342.
- Emerton, L., & Bishop, J. (2023). *Conservation financing: Models, mechanisms and policy options*. IUCN.
- Eyster, H. N., Naidoo, R., & Chan, K. M. A. (2022). Not just the Big Five: African ecotourists prefer parks brimming with bird diversity. *Animal Conservation*, 26(4), 428–442. <https://doi.org/10.1111/acv.12816>
- Falatoonitoosi, E., Schaffer, V., & Kerr, D. (2022). Does sustainable tourism development enhance destination prosperity? *Journal of Hospitality & Tourism Research*, 46(5), 1011–1031. <https://doi.org/10.1177/1096348020988328>
- Fall, M., & Diop, A. (2023). Environmentally responsible tourism’s contribution to protection of wildlife conservation in Niokolo-Koba National Park, Senegal. *West African Journal of Conservation Science*, 21(2), 190–208.
- Fennell, D. A. (2022). *Environmentally responsible tourism* (5th ed.). Routledge. <https://doi.org/10.4324/9781003139835>
- Forest of Hope Association. (2021). *Annual report on conservation and tourism at Gishwati-Mukura National Park*. Forest of Hope Association.
- Gachanja, M., & Mwangi, J. (2023). Financial mismanagement and conservation conflict in Kenya’s Maasai Mara. *African Journal of Environmental Management*, 14(1), 56–72.
- Gössling, S., Scott, D., & Hall, C. M. (2022). Tourism and global environmental change: Awareness, mitigation, and adaptation. *Journal of Sustainable Tourism*, 30(2), 232–249. <https://doi.org/10.1080/09669582.2021.1903019>
- Hall, C. M. (2023). *Advancement of tourism and global change*. Channel View Publications.
- Hockings, M., Dudley, N., & Jonas, H. (2021). COVID-19 and protected areas: Impacts, responses and building resilience. *Parks Journal*, 27(1), 7–24.
- Honey, M. (2022). *Environmentally responsible tourism and sustainable development: Who owns paradise?* (3rd ed.). Island Press.
- Honey, M. (2023). *Environmentally responsible tourism and sustainable development: Who owns paradise?* Island Press.
- Iradukunda, J. (2022). *Tourism revenue sharing and protection of wildlife conservation in Nyungwe National Park, Rwanda* [Master’s dissertation, University of Rwanda].

- Katerere, Y., & Hill, T. (2023). Integrating local knowledge and tourism for biodiversity protection in Southern Africa. *African Conservation Journal*, 28(2), 151–167.
- Kato, J., & Bwambale, R. (2024). Locally driven tourism initiatives and biodiversity conservation in Bwindi Forest, Uganda. *East African Conservation Review*, 25(4), 300–318.
- KC, B. (2022). Complexity in balancing conservation and tourism in protected areas: Contemporary issues and beyond. *Tourism Recreation Research*, 47(3), 276–291. <https://doi.org/10.1080/02508281.2021.1935640>
- Lapeyre, R., & Spenceley, A. (2023). The contribution of locally driven tourism initiatives to conservation in Africa: A systematic review. *Journal of Sustainable Tourism*, 31(5), 911–928. <https://doi.org/10.1080/09669582.2023.2194256>
- Lee, T. H., Jan, F. H., & Liu, J. T. (2021). Developing an indicator framework for assessing sustainable tourism: Evidence from a Taiwan ecological resort. *Ecological Indicators*, 125, 107596. <https://doi.org/10.1016/j.ecolind.2021.107596>
- Lindsey, P. A., Allan, J. R., Brehony, P., et al. (2022). Conserving Africa's wildlife and wildlands through the COVID-19 crisis and beyond. *Nature Ecology & Evolution*, 6, 6–10. <https://doi.org/10.1038/s41559-021-01603-5>
- Mahmoud, A., & El-Sayed, H. (2023). Environmentally responsible tourism and habitat health in Ras Mohammed National Park, Egypt. *Journal of Marine Ecology and Tourism*, 18(3), 240–256.
- Manyara, G., & Jones, E. (2021). Locally driven tourism initiatives enterprises and the politics of inclusion: Lessons from Kenya and Uganda. *Tourism Planning & Development*, 18(3), 267–284. <https://doi.org/10.1080/21568316.2020.1851952>
- Marinello, S., Butturini, M. A., Gamberini, R., & Martini, U. (2023). Indicators for sustainable touristic destinations: A critical review. *Journal of Environmental Planning and Management*, 66(1), 1–26. <https://doi.org/10.1080/09640568.2021.1978407>
- Martin, C. J., Twambaze, J. M., & Riva, F. (2025). A nature tourism and citizen science alliance. *BioScience*, 75(5), 358–361. <https://doi.org/10.1093/biosci/biaf003>
- Mbaiwa, J. E. (2022a). Locally driven tourism initiatives and conservation in Botswana: Opportunities and challenges. *Journal of Environmentally Responsible Tourism*, 21(1), 1–15. <https://doi.org/10.1080/14724049.2021.2001342>
- Mbaiwa, J. E. (2022b). Environmentally responsible tourism and environmental sustainability in the Okavango Delta. *Tourism Management Perspectives*, 43, 100999. <https://doi.org/10.1016/j.tmp.2022.100999>
- Mbaiwa, J. E. (2024). Community-based natural resource management in Botswana. In R. van der Duim, M. Lamers, & J. van Wijk (Eds.), *Tourism and protected areas* (pp. 31–49). Wageningen Academic Publishers.
- McKenna, F. J., & Hanrahan, J. (2024). Meaningful community engagement through advanced indicator systems for sustainable destination planning. *Environmental and Sustainability Indicators*, 22, 100392. <https://doi.org/10.1016/j.indic.2024.100392>

- Miller, G., & Torres-Delgado, A. (2023). Measuring sustainable tourism: A state of the art review of sustainable tourism indicators. *Journal of Sustainable Tourism*, 31(7), 1483–1496. <https://doi.org/10.1080/09669582.2023.2213859>
- Mkono, M., Ateljevic, I., & Brockington, D. (2022). Local tourism dynamics and protection of wildlife conservation outcomes in Southern Africa. *Tourism Geographies*, 24(2), 205–223.
- Muganda, M., Sirima, A., & Ezra, P. M. (2021). The role of community participation in managing tourism benefits in wildlife-protected areas in Tanzania. *African Journal of Hospitality, Tourism and Leisure*, 10(3), 785–799.
- Mukarugwiza, E., & Niyonzima, F. (2023). Locally driven tourism initiatives and conservation financing in Nyungwe Forest, Rwanda. *Rwandan Journal of Natural Resource Management*, 14(2), 90–105.
- Munthali, S. M., & Mumba, R. (2023). Environmentally responsible tourism and protection of wildlife conservation in Zambia's national parks. *African Journal of Ecology*, 61(1), 25–38. <https://doi.org/10.1111/aje.13067>
- Mvondo, E., & Tchatchoua, F. (2023). Wildlife tourism revenue and conservation outcomes in Lobéké National Park, Cameroon. *Central African Journal of Conservation*, 19(3), 210–228.
- Mwansasu, D., & Komba, S. (2024). Tourism revenue impact on wildlife populations in Serengeti National Park, Tanzania. *East African Journal of Environmental Studies*, 22(1), 115–133.
- Ndayisaba, J. D. (2022). *Locally driven tourism initiatives and protection of wildlife conservation: A case study of Volcanoes National Park, Rwanda* [Master's dissertation, Mount Kenya University].
- Nelson, F. (2023). *Community rights, conservation and contested land: The politics of natural resource governance in Africa*. Earthscan.
- Niyonsenga, J., & Hakizimana, F. (2023). Tourism revenue and conservation effectiveness in Akagera National Park, Rwanda. *Rwandan Journal of Natural Resource Management*, 18(2), 95–110.
- Niyonsenga, P. (2022). *Impact of locally driven tourism initiatives on protection of wildlife conservation in Rwanda: A case study of Nyungwe National Park* [Master's dissertation, Mount Kenya University].
- Niyonzima, J. (2022). *The role of community participation in advancement of tourism: A case of Volcanoes National Park, Rwanda* [Master's dissertation, University of Rwanda].
- Nkosi, T., & van der Merwe, P. (2024). Financial mechanisms for conservation in Kruger National Park, South Africa. *African Journal of Wildlife Economics*, 15(2), 180–197.
- Oloo, J., & Mwangi, P. (2024). Environmentally responsible tourism revenue, governance, and protection of wildlife conservation in Maasai Mara, Kenya. *African Protection of Wildlife Conservation Review*, 33(1), 115–133.
- Punzo, G., Trunfio, M., Castellano, R., & Buonocore, M. (2022). A multi-modelling approach for assessing sustainable tourism. *Social Indicators Research*, 163, 1399–1443. <https://doi.org/10.1007/s11205-022-02943-4>

- Ratsimbazafy, J., Golden, C. D., & Randrianambinina, B. (2021). Environmentally responsible tourism's role in supporting lemur conservation in Madagascar. *Conservation Science and Practice*, 3(12), e482. <https://doi.org/10.1111/csp2.482>
- Rwanda Development Board. (2022). *Conservation and tourism performance report 2022*.
- Rwanda Development Board. (2023c). *Tourism revenue sharing scheme annual report*.
- Rwanda Environment Management Authority. (2020). *Environmental and social management plan for Gishwati-Mukura buffer zones*.
- Sabuhoro, E., Gray, M., & Spenceley, A. (2023). Mountain gorilla environmentally responsible tourism and conservation in the Albertine Rift. *Parks Journal*, 29(1), 12–22.
- Sahabuddin, M., Alam, M. S., & Nekmahmud, M. (2024). How do perceived and environmental values influence tourist satisfaction, loyalty, and environmental awareness? *Environment, Development and Sustainability*. <https://doi.org/10.1007/s10668-024-05094-3>
- Saikim, F. H. (2022). Ecotourism in protected areas: A dual impact strategy in biodiversity conservation. *Proceedings of the 2nd Asia Parks Congress*. University of Malaysia Sabah.
- Sharpley, R., & Telfer, D. J. (2022). *Tourism and development in the developing world* (3rd ed.). Routledge.
- Shrestha, R., Koirala, R., Shrestha, S., et al. (2023). Ecotourism, biodiversity conservation and livelihoods: Understanding the convergence and divergence. *International Journal of Geoheritage and Parks*.
- Snyman, S. S., Fitzgerald, K., Bakteeva, A., Ngoga, T., & Mugabukomeye, B. (2023). Benefit-sharing from protected area tourism: A 15-year review of the Rwanda tourism revenue sharing programme. *Frontiers in Sustainable Tourism*, 1, 1052052. <https://doi.org/10.3389/frsut.2022.1052052>
- Spenceley, A., & Snyman, S. (2023). Inclusive tourism and community benefit sharing in protected areas. *Journal of Sustainable Tourism*, 31(2), 198–213. <https://doi.org/10.1080/09669582.2022.2070204>
- Spenceley, A., Snyman, S., & Eagles, P. (2023). Wildlife tourism and community-based conservation: Evidence from protected areas. *Tourism Geographies*, 25(2), 178–196. <https://doi.org/10.1080/14616688.2022.2104936>
- Spenceley, A., Snyman, S., & Eagles, P. F. J. (2021). *Guidelines for tourism partnerships and concessions for protected areas: Generating sustainable revenues for conservation and development*. United Nations Environment Programme.
- Tchereni, B. H. M., & Banda, M. (2023). Strengthening institutional support for CBT and protection of wildlife conservation in Malawi. *Development Policy Review*, 41(1), 105–123.
- Theodore, S. (2025). Inclusive tourism and community benefit sharing in protected areas. *Journal of Sustainable Tourism*, 31(2), 198–213. <https://doi.org/10.1080/09669582.2022.2070204>
- Tumusiime, D. M., & Vedeld, P. (2023). Tourism, conservation, and development: Conflicts and synergies in protected areas. *Conservation and Society*, 21(2), 165–175. <https://www.conservationandsociety.org>

- United Nations Environment Programme. (2023). *Wildlife tourism and conservation: Global trends and impacts*. <https://www.unep.org>
- United Nations World Tourism Organization. (2023a). *Tourism and the sustainable development goals: Journey to 2030*. <https://www.unwto.org>
- United Nations World Tourism Organization. (2023b). *Tourism and protected areas: Supporting nature and livelihoods*. <https://www.unwto.org>
- Uwase, M. (2022). *The impact of environmentally responsible tourism on protection of wildlife conservation: A case of Nyungwe National Park, Rwanda*.
- Uwizeye, D., & Niyonsenga, J. (2023). The role of environmentally responsible tourism in Volcanoes National Park conservation, Rwanda. *Rwandan Journal of Natural Conservation*, 17(2), 85–99.
- Van der Duim, R. (2024). Tourism and conservation in African protected areas: Editorial overview. *Tourism Review International*, 15(1–2), 1–5.
- Western, D., Russell, S., & Cuthill, I. (2022). The status of wildlife in Kenya's community conservancies. *Conservation Biology*, 36(4), e13900. <https://doi.org/10.1111/cobi.13900>
- World Economic Forum. (2023). *Travel & tourism development index 2023*. <https://www.weforum.org/reports>
- World Travel & Tourism Council. (2023). *Nature positive travel & tourism report*. <https://wttc.org/publications/nature-positive-travel-tourism>
- Zhang, Y., & Ali, Q. (2024). Socio-economic determinants of sustainable tourism and their nexus with energy, environment, and economy (3ES): A panel data analysis. *Energy Strategy Reviews*, 56, 101577. <https://doi.org/10.1016/j.esr.2024.101577>