



# Supporting SDG 15 (Life on Land) Through Ecotourism-led Conservation along the Panorama Route in Mpumalanga Province

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## Abstract

Sustainable Development Goal number 15 on one hand aims at protecting, restoring, and promoting the sustainable use of terrestrial ecosystems and manage forests sustainably. On the other hand, ecotourism-led conservation is an approach that harnesses the power of responsible travel to natural areas to support the preservation of biodiversity, enhance environmental education, and provide economic benefits to local communities. This study examines the contribution of ecotourism to conservation efforts along the Panorama Route in Mpumalanga Province, South Africa. The study examines the contribution of ecotourism to conservation efforts along the Panorama Route in Mpumalanga Province, South Africa, in support of Sustainable Development Goal 15 (Life on Land). Secondary data from existing literature will be used to analyze the impact of ecotourism on conservation outcomes along the Panorama Route. Literature reveals that ecotourism has contributed to habitat conservation, wildlife protection, and sustainable land use practices in the region. However, challenges persist, including inadequate infrastructure, resource exploitation and limited community engagement. Guided by the following objectives, (a) assess the economic, social, and environmental impacts of ecotourism on rural livelihoods, (b) identify ecotourism-led conservation initiatives (c) identify the benefits and challenges of ecotourism development, and (d) the study provide recommendations for sustainable ecotourism practices. This research will contribute to the understanding of ecotourism's role in supporting SDG 15, providing insights for policymakers, conservationists, and tourism stakeholders to enhance the conservation impact of ecotourism in the region.

**Keywords:** Ecotourism, Conservation, SDG 15, Life on Land, Sustainable Tourism

## INTRODUCTION

The United Nations created Sustainable Development Goal 15 (SDG 15), "Life on Land," as part of the 2030 Agenda with the intention of advancing the preservation, restoration, and sustainable use of terrestrial ecosystems (Krauss, 2022; Klein, 2020). A greater global understanding of the pressing need to preserve biodiversity, stop deforestation, and rehabilitate damaged land is reflected in this aim. An estimated one million species are in danger of becoming extinct, and large areas of the planet's land area have been degraded as a result of unsustainable practices, posing unprecedented challenges to terrestrial ecosystems as a result of global pressures from resource extraction and population expansion (Ceballos, Ehrlich & Raven, 2020; Saltré & Bradshaw, 2019). Through particular goals including stopping the loss of biodiversity, managing forests sustainably, and ensuring ecosystem resilience, SDG 15 tackles these issues.

Because of South Africa's distinct and varied ecosystems, many of which are located in biodiversity hotspots, SDG 15 is especially important there. A prime example of this natural diversity is the Mpumalanga Province, which is home to the well-known Panorama Route.



Beautiful natural sights like the Blyde River Canyon, Lisbon waterfalls, Bourke's Luck Potholes, God's Window, Pilgrim's Rest, Graskop and a variety of unusual plants and animals are what define the Panorama Route (Mhlabane, Nyikana & Rogerson, 2023). However, socioeconomic and environmental issues are also present in this area. For the region to remain viable over the long term, sustainable land management is essential due to the combined constraints of resource extraction, land degradation, and limited community resources.

A viable strategy to help achieve SDG 15 goals is ecotourism, particularly in poor nations like South Africa where money for conservation may be scarce. Ecotourism is defined as ethical travel to natural regions that preserves the environment and upholds the welfare of locals (Hussin, 2006; Gumede & Nzama, 2019; Martins & Shackleton, 2022). It benefits local communities economically in addition to providing funds for conservation initiatives (Bagul, 2009). The surge of ecotourists along the Panorama Route provides a means of encouraging environmental education, supporting local development, and allocating funds to conservation projects. Ecotourism encourages local stakeholders to actively participate in preservation efforts by directly connecting economic rewards to environmental protection, so fostering a sustainable coexistence between human populations and natural ecosystems (Bonye, Yiridomoh & Dayour, 2022).

Ecotourism along the Panorama Route is not without its difficulties, despite its potential (Mhlabane, Nyikana & Rogerson, 2023). Inadequate infrastructure, a lack of financing for conservation, and problems with equitable sharing of tourism-related income plague the area. Furthermore, increased tourism may result in environmental damage in the absence of good administration, undercutting the goals of conservation. These problems highlight why this study was conducted, with the goal of critically analyzing how ecotourism affects conservation results along the Panorama Route, highlighting both its advantages and disadvantages. This study offers important insights for policymakers, conservationists, and tourism stakeholders who aim to strengthen ecotourism's contribution to sustainable development in South Africa and comparable contexts by examining the ways in which ecotourism might promote SDG 15.

## RESEARCH PROBLEM

By encouraging biodiversity protection and sustainable land use practices, ecotourism along the Panorama Route has the potential to support Sustainable Development Goal 15 (SDG 15). However, there are several barriers in the way of achieving these objectives. Despite producing financial gains, the Panorama Route's present ecotourism activities face difficulties because of poor infrastructure, uneven enforcement of regulations, little community involvement, and pressures from resource exploitation (Siakwah, Musavengane & Leonard, 2020; Mhlabane, Nyikana & Rogerson, 2023). These problems beg the crucial question: in impoverished nations like Mpumalanga, South Africa, can ecotourism actually help achieve SDG 15's conservation goals?



Understanding the opportunities, difficulties, and practical effects of ecotourism-led conservation along the Panorama Route is the research problem that the study aims at addressing. Its specific goal is to evaluate the ways in which ecotourism supports sustainable land use practices, preserves biodiversity, and affects rural lives. The study will also look at the socioeconomic advantages of ecotourism, the success of current conservation efforts, and the obstacles to incorporating ecotourism completely as a tool for sustainable development.

## LITERATURE REVIEW

In order to comprehend how ecotourism contributes to Sustainable Development Goal 15 (SDG 15) and its real-world applications along South Africa's Panorama Route, this literature review examines important themes. These themes include conceptualizing SDG 15, the legislative frameworks guiding sustainable ecotourism, the specific challenges faced by ecotourism in developing countries, and initiatives aimed at promoting conservation through ecotourism along the Panorama Route.

### *Conceptualizing Sustainable Development Goal 15*

Terrestrial ecosystems must be preserved, restored, and managed sustainably, according to SDG 15, "Life on Land." (Bridgewater, Régnier & García, 2015). Preventing land degradation, managing forests sustainably, and conserving biodiversity are essential to achieving this objective. Targets including stopping the loss of biodiversity, encouraging sustainable forest management, and repairing damaged ecosystems demonstrate the intricate relationship between environmental health and human welfare. Targets 15.1 (conservation of ecosystems) and 15.5 (reduction of habitat degradation) are two examples of SDG 15 targets that set standards that may be used as indicators to assess conservation efforts (Krauss, 2022).

SDG 15 offers a crucial foundation for striking a balance between ecological protection and sustainable development in poor nations, where abundant biodiversity frequently coexists with economic difficulties. Ecotourism and SDG 15 have a conceptual foundation that supports community-driven resource management and the preservation of natural environments. By drawing eco-aware tourists and raising money for conservation, ecotourism serves as a means of achieving SDG 15's goals, especially in areas with little financing for conservation. This alignment serves as the theoretical foundation for examining how ecotourism might promote biodiversity preservation and sustainable land management in places like the Panorama Route.

### *Legislative Framework on Sustainable Ecotourism*

Sustainable ecotourism activities are supported by a number of national and international legislation frameworks. Globally, accords like the Aichi Biodiversity Targets and the Convention on Biological Diversity (CBD) support biodiversity conservation and sustainable land use (Buchanan, Butchart, Chandler & Gregory, 2020). Ecotourism is a crucial instrument for the



preservation of biodiversity as these frameworks urge nations to include sustainable tourism practices into their national conservation plans.

The National Tourism Sector Strategy (NTSS), the Protected Areas Act, and the National Environmental Management Act (NEMA) are among the laws in South Africa that serve as a foundation for sustainable ecotourism. All developments must comply with NEMA's environmental protection guidelines, which include impact studies for any operations that could have an influence on biodiversity. The NTSS promotes the growth of ecotourism in methods that protect natural resources and benefit local communities, recognizing it as a significant economic sector. Furthermore, land use and conservation within ecotourism destinations are governed by the Biodiversity Act and Protected Areas Act, which require that activities adhere to conservation principles in order to preserve biodiversity.

Nevertheless, there are still inadequacies in this framework. These statutory aims are not fully realized due to limited enforcement capability, particularly in rural regions like Mpumalanga, and competing interests between environmental conservation and economic growth. To promote ecotourism as an efficient conservation strategy along the Panorama Route, these deficiencies point to the necessity for more robust, context-specific legislation.

### *Challenges of Ecotourism in Developing Countries*

While ecotourism has great potential for sustainable development, it has specific problems in poor nations. Common challenges include poor infrastructure, insufficient conservation funding, and unequal distribution of tourism funding (Mnini & Ramoroka, 2020; Gumede, Ndlovu, Nzama & Nkosi, 2024). In many situations, a lack of infrastructure restricts access to remote places, concentrating tourist activity in select areas and causing environmental damage. Furthermore, without adequate funding, conservation projects may be implemented inconsistently, limiting ecotourism's influence on biodiversity preservation.

In South Africa, and particularly along the Panorama Route, these concerns are exacerbated by factors like as insufficient waste management, seasonal changes in visitor numbers, and a lack of local labour training. These concerns not only jeopardize the biological integrity of natural areas, but they also limit the potential socioeconomic advantages to local residents. Ecotourism's promise as a vehicle for sustainable development requires significant investment in infrastructure, training, and community-based conservation activities.

### *Promotion of Ecotourism-Led Conservation along the Panorama Route*

Ecotourism along the Panorama Route involves a variety of conservation-driven activities aimed at conserving the region's distinctive landscapes and wildlife. Programs that direct a percentage of tourist money into conservation initiatives, anti-poaching operations, and community-based



conservation have proven effective in encouraging sustainable tourism. These programs help to preserve habitat, reforest, and safeguard species, all of which are critical aims under SDG 15.

The Panorama Route's conservation initiatives rely heavily on community involvement. Local inhabitants can directly participate in conservation initiatives, profit economically, and contribute to the long-term management of natural resources through community-based ecotourism. However, issues remain, including as guaranteeing equitable revenue distribution and managing the environmental effects of large tourist numbers at popular locations. Strengthening these activities, including sustainable tourist management, fair benefit-sharing, and sufficient conservation funding, might help ecotourism achieve SDG 15 along the Panorama Route.

## ROLE OF THEORY IN THE STUDY

The theoretical basis for this study is based on sustainable development and community-based conservation theories, both of which offer important insights on how ecotourism might help achieve Sustainable Development Goal 15 (SDG 15). These theories provide a thorough knowledge of the processes at work when ecotourism is employed to promote biodiversity conservation, community welfare, and sustainable land use in places like the Panorama Route.

Sustainable Development Theory is based on the premise that economic progress, environmental sustainability, and social welfare are all interrelated and necessary for long-term success (Shi, Han, Yang & Gao, 2019). This idea highlights the need of development approaches that fulfill present demands while also ensuring future generations' ability to meet their own (Bossel, 1999). In this sense, ecotourism is considered as a development approach that combines economic rewards with environmental protection. For the Panorama Route, where natural vistas are both the major attraction and ecologically sensitive, sustainable development theory emphasizes the need of tourist policies that maintain biodiversity while creating economic opportunity for local communities.

Community-Based Conservation Theory emphasizes the importance of local communities in natural resource management and conservation (Mahajan, Jagadish, Glew, Ahmadiya, Becker, Fidler & Mascia, 2021). According to this theory, conservation results increase when communities have a direct economic interest in conservation initiatives, since they are more inclined to embrace sustainable practices that benefit them directly (Berkes, 2004). In the context of ecotourism, community-based conservation theory proposes that when local populations actively participate in ecotourism, they are motivated to maintain natural resources that attract tourists, resulting in mutual benefits for conservation and local livelihoods.

Together, these theories provide a complete framework for understanding ecotourism's involvement in achieving SDG 15 along the Panorama Route. Ecotourism has the ability to combine economic growth and environmental stewardship, according to sustainable development theory, but community-based conservation theory emphasizes the significance of



incorporating local stakeholders to secure long-term effects. This dual-theoretical approach is critical for investigating the processes by which ecotourism might benefit both conservation and community welfare in developing nations.

## PURPOSE OF THE STUDY

The purpose of this study is to evaluate the influence of ecotourism on conservation efforts and rural development along the Panorama Route in Mpumalanga Province, South Africa. This evaluation is especially designed to meet the objectives of Sustainable Development Goal 15 (SDG 15), which stresses the conservation, restoration, and sustainable management of terrestrial ecosystems. The study seeks to provide light on the benefits and drawbacks of ecotourism as a conservation strategy in a developing region by investigating ecotourism-led activities and their effects on biodiversity conservation and local livelihoods.

The study aims to achieve a number of specific goals, including: (1) assessing the economic, social, and environmental effects of ecotourism on the rural communities along the Panorama Route; (2) identifying and assessing conservation initiatives led by ecotourism that support wildlife protection, habitat preservation, and sustainable land use practices; and (3) analyzing the advantages and disadvantages of ecotourism development as a conservation tool. By tackling these goals, the study hopes to offer policy suggestions that will improve ecotourism's sustainability and efficiency in reaching SDG 15.

The ultimate goal of this study is to further knowledge of how ecotourism helps South Africa conserve its biodiversity and implement sustainable land management techniques. In order to encourage the development of measures to increase ecotourism's beneficial benefits on conservation within the Panorama Route and analogous locations worldwide, the findings will provide useful insights for policymakers, conservationists, and tourism stakeholders.

## RESEARCH METHODOLOGY

The study used a qualitative research methodology with an interpretive focus to investigate the function of ecotourism in conservation. Given the Panorama Route's complex socio-ecological linkages, a qualitative design allows for a more in-depth assessment of ecotourism's contributions and difficulties in the region. The study incorporates diverse viewpoints on the environmental, social, and economic implications of ecotourism by assessing secondary data sources such as published research, government policy documents, and case studies. Purposive sampling strategy was used, focusing on literature and publications that expressly address ecotourism's role in conservation, rural development, and SDG 15 in the South African context. Academic papers, government policy documents, and case studies of ecotourism activities along the Panorama Route are all useful sources. This tailored sample enables an in-depth investigation of key topics, guaranteeing that the literature chosen provides useful insights into the research subject. Data collection is based on secondary sources, including a wide range of literature on



ecotourism, sustainable development, and conservation methods in South Africa. Government records, non-governmental organization (NGO) publications, and past research studies on the Panorama Route offer a wealth of information. This secondary data enables the identification of major themes, conservation strategies, and issues associated with ecotourism-driven conservation activities in the region.

This study's data analysis is thematic content analysis, with an emphasis on patterns and themes connected to the impact of ecotourism on conservation and community development. Key issues, such as economic advantages, environmental repercussions, community participation, and policy implications, are identified and examined to better comprehend ecotourism's compatibility with SDG 15 objectives. This analytical approach aids in systematically evaluating the role of ecotourism in accomplishing conservation and development objectives, while also exposing problems and limits. To ensure the study's rigor and trustworthiness, various quality standards are used. To preserve credibility, data sources are triangulated, and conclusions are corroborated using various literature from reliable sources. Transferability is enhanced by providing context for the Panorama Route, allowing the findings to guide similar ecotourism-led conservation programs in other developing regions. Consistent data analysis processes ensure dependability, whereas documenting the research process and keeping transparency in data interpretation improves confirmability.

## **SIGNIFICANCE OF THE STUDY**

This study is significant for both academic research and practical conservation efforts since it examines ecotourism as a method for advancing Sustainable Development Goal 15 (SDG 15) along the Panorama route. The study intends to give policymakers, conservationists, and stakeholders interested in sustainable tourism with practical insights by investigating ecotourism's role in biodiversity preservation, rural development, and sustainable land management.

It is anticipated that the study's conclusions will point to important areas where legislative actions might strengthen ecotourism's influence on conservation. To encourage conservation initiatives, legislation that promote fair benefit-sharing arrangements, for example, might guarantee that communities nearby directly profit from tourism. Further preventing resource abuse and reducing the environmental impact of tourism activities might be achieved by improved infrastructure and environmental laws that are specific to the ecology of the Panorama Route.

Policymakers should also consider implementing training and capacity-building programs that enable local citizens to play active roles in ecotourism, so supporting community ownership of conservation activities. Furthermore, strategic alliances between the government, business sector, and non-governmental organizations (NGOs) may facilitate financial and technical assistance for conservation initiatives, improving their long-term viability.



To realize ecotourism's full potential as a conservation approach, focused investments in sustainable infrastructure, conservation education, and community participation are required. Creating local governance frameworks that promote conservation aims and encourage stakeholder engagement might result in a sustainable ecotourism model that balances ecological and socioeconomic demands.

Through an analysis of the Panorama Route, this study provides a model for introducing ecotourism techniques that support SDG 15 in comparable developing areas. The results might help shape more comprehensive policy frameworks that promote ecotourism that is sustainable, creating a situation where tourism and conservation work together to build long-term ecological and social resilience.

## CONCLUSION

This study looked at how ecotourism along South Africa's Panorama Route can help achieve Sustainable Development Goal 15 (SDG 15). SDG 15 places a strong emphasis on protecting terrestrial ecosystems, encouraging biodiversity conservation, and supporting sustainable land use. This study clarifies the advantages and difficulties of employing ecotourism as a conservation tactic in a developing setting by examining its effects on rural livelihoods, biodiversity preservation, and sustainable resource use. The results highlight how ecotourism, when done right, may promote habitat conservation, boost the local economy, and increase environmental consciousness among both tourists and residents. For instance, ecotourism projects along the Panorama Route have supported animal protection, habitat preservation, and sustainable practices that support the goals of SDG 15. However, this study also identifies several obstacles that might reduce ecotourism's efficacy as a conservation tool, including poor infrastructure, a lack of community involvement, and the requirement for fair income sharing. Investing in sustainable infrastructure, promoting community-based conservation models, and fortifying benefit-sharing-supporting regulatory frameworks are some of the recommendations the report makes to optimize ecotourism's conservation effect. These issues may be resolved so that ecotourism can more effectively serve SDG 15 by providing a means of achieving sustainable land use, biodiversity conservation, and community empowerment. To sum up, this study offers insightful information to stakeholders in the tourist industry, environmentalists, and governments who want to match ecotourism with SDG 15 goals. The Panorama Route serves as an example of how ecotourism may promote sustainable development in areas with abundant biodiversity. In order to achieve SDG 15 and foster a positive link between conservation and economic growth in South Africa and elsewhere, ecotourism may be a potent instrument with the help of smart policy support and community participation.



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