



Sustaining Taudaha: The Role of Ecotourism in Conservation and Development

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Abstract

The contribution of ecotourism to the sustainable development in Taudaha is the main aim of this study. It is a tiny wetland in a Kathmandu suburb that is significant both culturally and ecologically. In order to assess the economic, ecological, and social effects of ecotourism, the study used a mixed-methods approach that includes surveys, interviews, focus group discussions, and field observations. The findings support a number of Sustainable Development Goals (SDGs) by demonstrating that ecotourism plays a vital part in the local livelihoods, infrastructural development, and environmental awareness. The biodiversity of Taudaha, especially the wetland bird species, is a major drawback to its ecotourism promotion. Similarly, the issues of poor waste management, less community participation, and commercialization risks endure, challenging the area. Therefore, the research proposed co-operation among stakeholders and community-based methods as ways to guarantee equal sharing of benefits and protection of the ecology and environment. Thus, uncovering the potential of ecotourism as a model for integrated development.

Keywords: *Ecotourism, Sustainable Development, Biodiversity Conservation, Community Participation, Taudaha Lake (wetland)*

Introduction

Ecotourism has become a widely accepted substitute for mass tourism in recent decades, which supports socioeconomic development and environmental sustainability (Akama, 1996). According to Ceballos-Lascurain (1996), ecotourism is responsible travel to natural areas, travel that enhances the quality of life of the local people while preserving the environment. In developing nations where natural and

cultural resources are essential to livelihoods and identity, this dual-purpose model balances ecological preservation with human progress (K. C. et al. 2015; Woosnam, 2011). According to Shrestha et al. (2013), Nepal is a popular ecotourism destination because of its rich Himalayan landscapes, varied biodiversity, and cultural inheritance. It is difficult to strike a balance between tourism development, social and environmental sustainability in the country. Taudaha Lake is a small but culturally and ecologically significant wetland located on the southern edge of Kathmandu, which is an important location that exemplifies this pressure.

Taudaha Lake attracts tourists because of its biodiversity and spiritual significance. It is home to aquatic plants and animals as well as more than 115 bird species, including endangered migratory birds. Due to its connections to nearby holy places like Taudaha Ganesh Temple and serpent deities (Nagas), the lake also has religious significance (Khatri et al. 2023). It's positioned as a model ecotourism destination that is in the countryside of Kathmandu because of these features. However, rapid expansion of cities and towns, environmental pollution, and unsustainable tourism practices are posing an increasing threat to its environmental and ecological integrity. Over the past ten years, there has been a 70 percent decrease in bird population due to noise and human disturbances from the wetlands and their surrounding areas located in the countryside of the major cities, while invasive species and rapid infrastructure growth have deteriorated the ecosystem (Xu, Jin, & Yng, 2024; Scheyvens, 1999).

The ecological balance is still precarious, even though the local institutions and stakeholders have started ecological restoration, with only modest results (Shrestha et al., 2013). In spite of being economically beneficial, tourism has resulted in increased commercialization and a decline in environmental quality. Shrestha et al. (2013) further elaborated that Taudaha frequently fails to live up to the promise of sustainable development, like many ecotourism locations in the country. There are community-based tourism initiatives, but their scope and influence are constrained and controlled by a lack of inclusive governance and financial limitations. Because of this, a small number of powerful stakeholders often benefited from economic gains, leaving marginalized groups under-represented as well as under-benefited (Samal & Dash, 2023).

Moreover, commercialization and commodification of culture for tourism may lead to a loss of their authenticity in local cultures and cultural weakness among residents (Zhang, Yin, & Peng, 2021). Additionally, Nepal (2007) highlights that the inadequate participation of local communities in decision-making processes is disadvantageous to building public trust and achieving conservation outcomes. This separation between theory and practice exemplifies the gap between what ecotourism

aims to achieve and how it is implemented in the real world. To achieve its goals of conserving biological diversity, creating employment opportunities for locals, and enhancing the importance of cultural heritage through ecotourism, it is essential that impartial sharing of benefits is practiced among stakeholders of the society, that existing partnerships are strengthened through collaboration, and that an effective governance structure is in place (Ceballos-Lascurain, 1996; Shrestha et al. 2013).

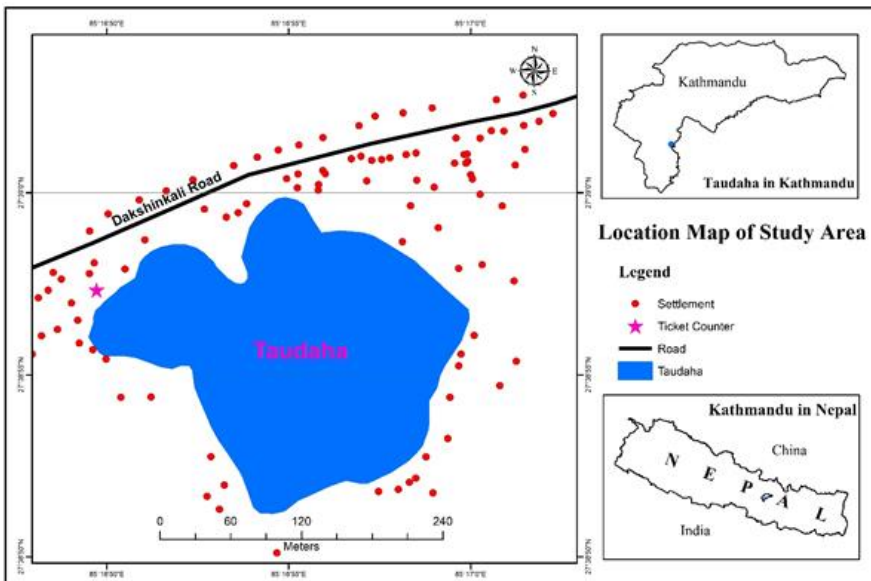
There is a significant gap in the literature on the effects of ecotourism on local communities and their livelihoods. Therefore, this research fills that gap by investigating the environmental, economic, and cultural effects of ecotourism and how it can be improved through community engagement or by the effectiveness of institutions in Taudaha. Ecotourism in Taudaha is important for three major reasons: it provides additional research to address the lack of ecotourism-related research in Nepal, provides a foundation for policy-making, and offers specific recommendations for improving the balance between conservation and sustainable development.

Selection of the Study Area

Taudaha Lake is located in ward no. 15 of Kirtipur Municipality, Kathmandu covers approximately 4 hectares of land. The lake has clear, clean water and serves as a seasonal breeding and nesting site for many species of migratory birds. There is great religious and cultural importance associated with the lake, which is one of the largest lakes within the Bagmati River watershed.

Figure 1

Location map of the study area



Methods and Materials

To explore the contribution of ecotourism for the sustainable development in Taudaha, a mixed-methods approach has been used. In this mixed-methods research design, both qualitative and quantitative data collection techniques have been applied. The quantitative survey consisted of structured survey instruments administered to 50 individuals from the stakeholders (i.e., 20 local residents, 20 tourists, and 10 local authorities), for the perceived economic benefit and changes in livelihood resulting from ecotourism, and their perceptions of impacts on the ecology and environment. Similarly, qualitative data were collected through 20 semi-structured interviews with the government officials, ecotourism operators, environmentalists, and local community members to explore their involvement in ecotourism, culture preservation, and potential impacts on the environment in Taudaha. In addition to that, FGDs have also been administered with local people to capture their opinions, perceptions, and experiences on ecotourism development in the study area. Field observations have also been made over a period of eight weeks and provided information regarding environmental conditions and tourist-related activities in the Taudaha area. Likewise, information was also obtained from secondary sources (i.e., government reports, NGOs, academic articles, etc.) for the triangulation of the results.

To ensure an extensive spectrum of stakeholder representation, the purposive sampling technique was employed to select informants for interviews and FGDs. Similarly, stratified random sampling was utilized for the researcher's survey components in order to capture demographic variations in this study. While quantitative data were examined using descriptive and inferential statistics, qualitative data were examined thematically. The study produced a thorough grasp of the socio-economic and ecological effects of ecotourism development by employing this comprehensive methodology.

Result and Discussion

Economic Contributions

Ecotourism in Taudaha has been a significant factor in enhancing the local economy, improving the livelihood of residents by providing jobs in eco-lodges, restaurants, and tour services. It has also increased the household economy through tourism because of its natural and cultural significance. In Taudaha, the growth of tourism has been positive for the local businesses and has contributed to the development of infrastructure and services such as schools and health facilities. These are the indications of the improvement of the quality of life for the entire community. In addition to that, the growth of ecotourism has also created multiple effects, such as the revenue generated by tourists increases the demand for products and services from the local community and supports the economic development of other sectors in and

around Taudaha. Therefore, ecotourism creates a sense of ownership and pride among local people in their cultural and natural heritage.

Ecotourism in Taudaha provides significant environmental, social, and cultural benefits, like its well-known economic impacts. It promotes sustainable practices, such as promoting environmental awareness and responsible resource management, which is very crucial. Taudaha is an excellent example of how ecotourism in a tiny ecological belt can help to achieve a strong balance between economic growth and ecological preservation, as well as the complementary relationship between the two, because of local effort. Moreover, ecotourism contributes to the sustainable development that can be seen in the way it combines conservation efforts with local community development initiatives. Overall, Taudaha has created an example of how well-organized and well-managed ecotourism efforts can provide the foundation for environmental management and socio-economic resilience of the local people.

In Taudaha, as ecotourism has provided an important source of income, people rely on their employment opportunities created by the workers of tourism. As tourism has been growing year after year due to its natural and cultural richness, this growth has supported the development of local businesses and has encouraged the development of other infrastructure. Similarly, ecotourism has also created a secondary market for other goods and services that are provided in Taudaha and throughout the local economy. Therefore, it has been beneficial to the local economy and community because it creates an opportunity for the local people to work together to preserve their heritage while fostering pride and ownership in the community. It provides environmental sustainability through environmental awareness and responsible resource management. All these benefits associated with some SDGs to create an environment that provides for sustainable development in Taudaha. Through the application of ecotourism and responsible environmental management, it is evident that ecotourism can effectively contribute to both environmental protection and socio-economic resilience of the local communities.

Environmental Conservation

- *Waste Management Practices*

The waste management survey for Taudaha shows a variety of views. Six percent and 18 percent of survey respondents strongly agree and agree that waste is picked up regularly, and the collection mechanism is satisfactory. Public awareness of waste disposal has a large area of neutral respondents (24%). This indicates the uncertainty or disruptiveness in the methods of educating people about waste

management or disposal. It indicates an opportunity for service improvement and community education exists.

Table 1

Waste Management Responses

Waste management indicator	Response option	Number of respondents	Percentage
Waste collection frequency	Strongly agree	3	6
Waste collection methods	Agree	9	18
Public awareness of waste disposal	Neutral	12	24
Waste management infrastructure	Disagree	18	36
Public and community involvement	Strongly disagree	8	16

Source: Field Study, 2024

Notable dissatisfaction with the waste management system in Taudaha is distinctly observed, because 36 percent of the respondents disagreed with the adequacy of waste management, and 16 percent strongly disagreed with the level of community involvement. The lack of engagement from both residents and authorities in waste management activities is a major concern for the local people. Similarly, the weighted average demonstrates a general call for improved systems of waste management. Therefore, it highlights the need for the improvement of facilities, more frequent waste/garbage collection, and greater public participation and awareness regarding waste management practices required for sustainable development in Taudaha.

- *Awareness of Sustainable Tourism*

The sustainability awareness shows a wide range of perceptions within the community, such as a notable proportion (20%) of the respondents expressed strong agreement or general agreement on the significance of cultural sustainability. It indicates that they view it as an essential part of the overall sustainability of Taudaha. Maintaining cleanliness ultimately leads to sustainable lifestyles, according to another group (24%) of the respondents. Furthermore, the research shows that local communities support environmental sustainability activities to a respectable degree. Nearly 20 percent held a neutral opinion about the sustainability issue. These respondents may require more knowledge on this element of sustainability, or they may not have a strong view. A much larger portion (26%) of the respondents disagreed with corporate governance being related to sustainability, indicating a greater deal of skepticism or distrust concerning institutions' ability to align themselves with sustainable development goals. A small percentage (10%) of the respondents strongly disagreed with production patterns having a significant effect on sustainability; likely,

these respondents have little awareness and understanding of the effects that their production patterns have on the environment. Overall, the mixed responses reflect a great deal of awareness surrounding cultural and cleanliness-related sustainability factors, but they also reflect the need for increased education and awareness-building efforts in the community surrounding governance and production practices regarding sustainability.

Table 2
Awareness of Sustainable Tourism

Sustainable awareness	Response option	Number of respondents	Percentage
Culture	Strongly agree	10	20
Clean community	Agree	12	24
Care	Neutral	10	20
Corporate governance	Disagree	13	26
Production patterns	Strongly disagree	5	10

Source: Fiend Study, 2024

- *Biodiversity and Tourist Attraction*

Taudaha has long been known as a biodiversity hotspot and a peaceful retreat for nature lovers. Results from this research demonstrate a very favorable response from survey participants regarding the ability to attract visitors, based in largely part on its unique biodiversity.

Wetland birds are particularly vulnerable and therefore represent a major focus for conservation efforts because of their importance to the diversity of wetland systems around the world (Ma et al., 2009; Brandolin & Blendingen, 2016). In Nepal, there are a total of 886 dependable observations of various bird species, of which 193 are referred to as “wetland-dependent” in their habitat use (Adhikari et al. 2019; DoNPWC & BCN, 2018; Bhandari, 1996; Siwakoti, 2016). Globally, there are at least 12 species of wetland birds that have been classified as endangered, and in Nepal, there are 44 species listed as endangered due to many of the same threats as noted above (Baral et al. 2012). Approximately 67-70 percent of all wetland birds observed in Nepal are classified either as “endangered” or “critically endangered”. Taudaha is not an exceptional wetland of Nepal, and it also faces the same problem because of encroachment, as well as the expansion of urban or city areas.

Half of the participants voiced strong agreement with the statement that the local biodiversity logically attracts people to visit the area, while 36 percent agreed with this assessment. Only 6 percent responded by disagreeing or strongly

disagreeing, indicating a small number of oppositions. This has produced an average score of 4.28 and demonstrates that there is an overall high level of support for the biodiversity features of Taudaha (including location, variety of birds, ecological features, etc.). This indicates that the biodiversity of Taudaha is an important resource for ecotourism. As there were so few people who disagreed or gave neutral responses to this point, it is likely that their lack of knowledge about the biodiversity of Taudaha or different experiences will result in a lack of support for it, rather than its rejection as an important resource for ecotourism, indicating that this resource is widely recognized by visitors and residents.

Environmental Impact on Ecotourism

- *Impact on Fish Conservation*

The indicator of fish conservation shows a very high positive opinion of the contribution of ecotourism to fish conservation efforts in Taudaha Lake. The respondents at 50 percent reported a huge favorable effect, supporting the assertion that ecotourism offers vital support for protecting and increasing the fish in the lake, which is critical for preserving biodiversity.

Table 3

Impact on Fish Conservation

Impact on fish conservation	Response option	No. of respondents	Percentage
Incredibly positive impact	Strongly agree	25	50
Positive impact	Agree	15	30
Neutral impact	Neutral	5	10
Negative impact	Strongly disagree	5	10

Source: Field Study, 2024

Another 30 percent of respondents also indicated that ecotourism provides benefits from the initiatives that support fish conservation, relating to the ecological well-being of the lake. However, being less knowledgeable or less involved, ten percent of the respondents have no opinion regarding fish conservation, and the same proportion of the respondents reported as negative opinions, likely due to apprehension over detrimental effects from tourism on the ecological stability of the lake. The broad range of opinions indicates that a more environmentally responsible and balanced approach to ecotourism is warranted, and these results suggest that while most respondents see the positive attributes of ecotourism for fish conservation, there are many opportunities to improve community awareness and fish conservation efforts related to the concerns stated in the previous perceptions of fish conservation.

- *Sanctuary for Birds*

Through an assessment of the bird sanctuary located in Taudaha, which is partially supported through ecotourism. During the discussion, the respondents provided a favorable impression of the sanctuary. Approximately 20 percent of the surveyed respondents gave a very effective rating, while 35 percent gave it an effective rating. In a similar vein, a sizable proportion of the surveyed respondents (55%) gave a positive rating. Additionally, thirty percent of them thought that the sanctuary was poorly run, and only fifteen percent thought that improvements were necessary due to ineffective management. These responses emphasized how the sanctuary provides a secure habitat for birds, supporting biological diversity and ecological balance. It is evident from the favourable response that ecotourism has had a significantly impact on the conservation efforts, and that further public participation and stakeholders' engagement will further boost environmental protection. The favourable feedback from this study reflects that the sanctuary has the potential to play a significant role in providing habitat for birds with a proper sanctuary environment, which is essential to maintaining ecological balance and biological diversity.

- *Wetland Biodiversity Indicator*

The biodiversity indicator shows that 50 percent of the local respondents agreed on the importance of species richness as an indicator of the biodiversity of Taudaha. This indicates that the community recognizes and appreciation its extensive range of flora and fauna. The ecological significance of biodiversity in maintaining environmental quality seems to be recognized and valued by local stakeholders. According to 36 percent of the respondents, the water quality indicator appears to be a major component of the local biodiversity. They are suggesting that it has a significant role in the local biodiversity. However, only eight percent of respondents expressed that they were neutral about the quality of the habitat. A small number (4%) of the respondents disagreed with the significance of vulnerable species, and just two percent disagreed with the ecological services. As a result, this information reveals that the community is generally supportive of preserving biodiversity. Nevertheless, although community knowledge regarding the importance of species richness and water quality is evident, there is a lack of community awareness of habitat quality and ecosystem services. As a result, the data indicate a need for greater public education and engagement regarding biodiversity to promote community support for conservation and provide a more comprehensive understanding of the importance of biodiversity and its ecological components in sustaining the ecological equilibrium of Taudaha.

Table 4*Wetland Biodiversity Indicator Chart*

Biodiversity indicator	Response option	Number of respondents	Percentage
Species richness	Strongly agree	25	50
Water quality	Agree	18	36
Habitant quality	Neutral	4	8
Threatened species	Disagree	2	4
Ecosystem services	Strongly disagree	1	2

Source: Field study, 2024

1. *Ecological Conservation Efforts*

The ecological conservation efforts have proven their success by providing high community satisfaction with ecotourism as an effective way to preserve the environment of Taudaha. For example, one out of four respondents considered an ecological conservation effort to be “excellent”, therefore appreciating their successful promotion of environmental stewardship through ecotourism. Examples of the conservation efforts' successes include protecting bird species and aquatic plants. Therefore, ecotourism has a very positive effect on the ecological sustainability of Taudaha.

Table 5*Ecological Conservation Effort Indicators*

Ecological conservation efforts	Response option	Number of respondents	Percentage
Excellent	Strongly agree	13	25
Good	Agree	17	35
Fair	Neutral	2	5
Satisfactory	Disagree	18	35

Source: Field Study, 2025

Additionally, more than one-third of the survey respondents rated the ecological conservation efforts as “good”; though this is considered a success, it indicates a need for additional support to effectively implement the programs. Of the survey respondents, only five percent rated it as “fair”, and agreed that, while they are making progress, they would like to see improvements in the management of ecological conservation efforts. Thirty-five percent are satisfied with it and have also pointed out a minor issue, such as the impact of concrete embankments on bird populations, as well as increased pressure on the area due to growing tourism.

Collectively, responses show that ecotourism in Taudaha is contributing to improving ecological conservation efforts.

Role in Awareness Conservation

By participating in ecotourism, 45 percent of the surveyed participants were able to gain substantial awareness of the conservation issues facing the local area. It found that 45 percent of the survey participants (23 of 50) felt they had become very knowledgeable concerning conservation issues; 25 percent reported increased knowledge, while only 20 percent of survey participants felt informed by participating in ecotourism activities. Of survey participants, only ten percent of individuals reported an increase in their environmental awareness. Based on this, it can be concluded that the majority surveyed, over 70 percent, felt they had an increased awareness of environmental conservation. Ecotourism provides an opportunity to create awareness and an understanding of issues relating to the environment, creating additional avenues for local and visitor involvement in conservation, and providing a strategy to achieve sustainability and conservation. The indicators are an indication of how ecotourism can offer a benefit to the local people through education regarding the environment (KC et al. 2015). The data indicates that ecotourism increased the environmental awareness and undertaking of local residents (45 percent of respondents indicated that they became more aware).

Linking with the Sustainable Development Goals

Table 6 shows how the research results correlate with the Sustainable Development Goals (SDGs). Additionally, the multifaceted way in which ecotourism benefits in Taudaha. Furthermore, through the examination of its benefits to sustainable development and environmental preservation, this study shows that ecotourism will promote the SDGs by increasing household income and creating jobs, which better contribute to SDG 1 (no poverty) and 8 (decent work).

Table 6

Sustainable Development Goals and their links with the Research Findings

Sustainable Development Goals (SDGs)	Description	Link to research findings
SDG 1: No poverty	End poverty in all its forms everywhere.	The research indicates that ecotourism has significantly boosted household income, contributing to poverty alleviation among local communities in Taudaha.
SDG 8: Decent work and economic growth	Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all.	The study finds that ecotourism has created job opportunities and fostered community development through investments in infrastructure like schools and healthcare facilities.

SDG 11: Sustainable cities and communications	Make cities and human settlements inclusive, safe, resilient, and sustainable.	Improvements in local infrastructure funded by ecotourism initiatives contribute to more sustainable urban environments, enhancing community services.
SDG 12: Responsible consumption and production	Ensure sustainable consumption and production patterns.	The research emphasizes the importance of promoting eco-friendly tourism practices that minimize environmental impacts and encourage responsible consumption among tourists.
SDG 13: Climate action	Take urgent action to combat climate change and its impacts.	Ecotourism initiatives raise awareness about environmental conservation and climate change issues among locals and tourists, leading to proactive measures in addressing these challenges.
SDG 15: Life on land	Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation, and halt biodiversity loss.	The preservation of biodiversity through ecotourism efforts supports the conservation of local habitats and endangered species.
SDG 17: Partnerships for the goals	Strengthen the means of implementation and revitalize the global partnership for sustainable development.	The need for stronger collaboration among stakeholders is highlighted in the study as essential for ensuring effective ecotourism practices that benefit both the environment and local communities.

Source: Fiend Study, 2024

In addition to creating jobs, there will be an increase in the overall quality of life in Taudaha. Investments in local infrastructure will enhance the quality and contribute to the sustainability goals, as outlined in SDG 11 (sustainable cities and communities). The research results confirmed that ecotourism supports environmental conservation and sustainability by promoting climate action (SDG 13), responsible consumption (SDG 12), and land-based ecosystems (SDG 15). Ecotourism enhances the quality of life in the community while preserving local cultures; however, some of the challenges of ecotourism are unequal benefits and adverse environmental impacts. Therefore, it is imperative to engage all relevant stakeholders to strike a balance between conservation and socio-economic growth through the implementation of community-based policies as outlined in SDG 17.

Potential of Eco-friendly Tourism

Eco-friendly tourism provides tremendous potential as a means to support sustainable development; survey results indicate strong support (88%) for eco-friendly tourism potentiality contribution to sustainability among respondents. Only two percent disagreed with the potential of eco-friendly tourism. Overall, respondents

were overwhelmingly positive concerning the opportunity to promote sustainability through eco-friendly tourism.

Respondents demonstrated general consensus on the fact that eco-friendly tourism helps promote economic development and environmental sustainability, as evidenced by the weighted average score of 4.30. The positive sentiment expressed by respondents provides an opportunity for tourism stakeholders, including local governments, businesses, and communities, to mobilize the public in support of advancing sustainable tourism initiatives. The high level of support from the respondents provides a unique opportunity to gain momentum for implementing eco-friendly tourism practices.

Social Contribution of Ecotourism

Ecotourism model of Taudaha positively impacts all areas of the community, from engaging communities with one another to creating an identity for the culture through cultural preservation, and developing environmental awareness. With the increasing number of visitors to Taudaha for ecotourism, this is an opportunity for local people to actively engage in ecotourism. As a result, local residents now feel pride and ownership for their natural and cultural resources. Community-based tourism initiatives have empowered local residents with the opportunity to share their traditional knowledge, increasing the amount of cultural exchange between locals and tourists while enhancing community identity. Crafts, dance, and festivals are examples of the traditions that have been revived and are now sought-after tourist attractions and a way for local communities to preserve their cultural heritage. This relationship strengthens community ties and promotes the passing down of customs from generation to generation. Local people are more prepared to maintain sustainable practices through the educational program provided by the ecotourism operators in Taudaha, which has raised local knowledge of the importance of biodiversity and ecosystem conservation.

Table 7

Social Contributions of Ecotourism

Social contribution	Description	Impact
Community participation	Residents engage in ecotourism initiatives, fostering ownership and pride in heritage.	Enhanced sense of community identity and cohesiveness.
Cultural preservation	Revitalization of local customs through tourism activities,	Strengthened cultural identity and

	showcasing traditional crafts and practices.	intergenerational knowledge transfer.
Environmental awareness	Educational programs raise awareness about conservation among locals and tourists.	Increased adoption of eco-friendly practices within the community.
Improved quality of life	Revenue from tourism is reinvested into community infrastructures like schools and healthcare facilities.	Better access to essential services leads to improved health and education outcomes.

Source: Field Study, 2024

Table 7 reflects the main social benefits of ecotourism. Participation in the community, maintaining traditional customs, raising awareness of environmental issues, and better living conditions are some of the contributions exist. These contributions show how ecotourism can support sustainable development in this region in a variety of ways. Funds from the tourism revenue have been used to enhance community infrastructures, giving locals easier access to basic amenities and a better standard of living. The local people will benefit from better health and education as a result of this development, and the social benefits of ecotourism can be further investigated. The overall social benefits of ecotourism include better living conditions, larger community involvement, improved cultural identity, and increased knowledge of the effects of human activities on the environment. When taken as a whole, these elements highlight the significant role ecotourism plays in promoting equitable and sustainable social development in Taudaha.

Conclusion

Many sustainable development initiatives are motivated by ecotourism in Taudaha, which offers numerous advantages in the social, economic, and environmental realms. In terms of the economy, this signifies a significant improvement in the quality of life for locals through the development of local infrastructure, the creation of jobs, and greater financial security. In the social sector, this has led to greater engagement between community members, as well as conserving cultural heritage and educating the public about the value of cultural heritage. Thus, fostering greater intergenerational cultural continuity and improving the overall quality of life for the local people. In the environmental sector, ecotourism has significantly increased public awareness of environmental conservation and supported conservation strategies via the protection of numerous species of wetland birds; however, some waste disposal and habitat quality issues still exist within Taudaha.

Ecotourism has become widely recognized by the stakeholders as an eco-friendly tourism sector, which aligns with numerous Sustainable Development Goals, including: 1) no poverty, 2) decent work, 3) climate action, and 4) life on land. This research has proven that the components of ecotourism will continue to expand in the future with properly organized and structured support in the areas of community participation, environmental education, and policy development. Thus, strengthening all aspects of ecotourism initiatives and creating a sustainable model for ecotourism-led sustainable development.

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