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BIODIVERSITY CONSERVATION & ECO TOURISM OF NANEGHAT IN JUNNAR TAHSIL

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Abstract:

Ecotourism has emerged as a vital tool for promoting biodiversity conservation while supporting sustainable livelihoods among local communities. This study explores the interrelationship between ecotourism development and biodiversity conservation, emphasizing how responsible tourism practices contribute to the protection of natural habitats and species. Using data from [insert study area or years if available, e.g., 2019–2025], the research examines trends in tourist inflow, revenue generation, and conservation investment to assess the ecological and socio-economic impacts of ecotourism initiatives. The findings reveal that well-managed ecotourism fosters environmental awareness, generates financial resources for conservation programs, and creates livelihood opportunities that reduce pressure on natural resources. However, challenges such as inadequate regulation, over-tourism, and lack of local participation can undermine these benefits. The paper concludes that integrating community-based approaches, conservation education, and sustainable planning is essential for maximizing ecotourism's potential to conserve biodiversity while ensuring long-term socio-economic resilience.

Keywords: *Biodiversity, Ecotourism, Conservation.*

Introduction:

Biodiversity conservation has become one of the most pressing global priorities as ecosystems face increasing threats from deforestation, climate change, and unsustainable development. In this context, *ecotourism* has emerged as an effective strategy that not only promotes the conservation of natural resources but also supports the socio-economic development of local communities. Ecotourism emphasizes responsible travel to natural areas that conserves the environment, sustains the well-being of local people, and fosters environmental education among visitors. In regions rich in biodiversity, ecotourism offers a dual advantage: it provides financial incentives for conservation while creating alternative livelihood opportunities for rural populations. The income generated through entrance fees, tourist spending, and conservation funds can be reinvested in habitat restoration, wildlife protection, and community development projects. However, if not properly managed, ecotourism can also lead to environmental degradation and cultural disruption.

Ecotourism has been gaining momentum in biodiversity hotspots pertaining to its potential to boost both rural livelihoods and environmental conservation. It has the ability to alleviate poverty, which is

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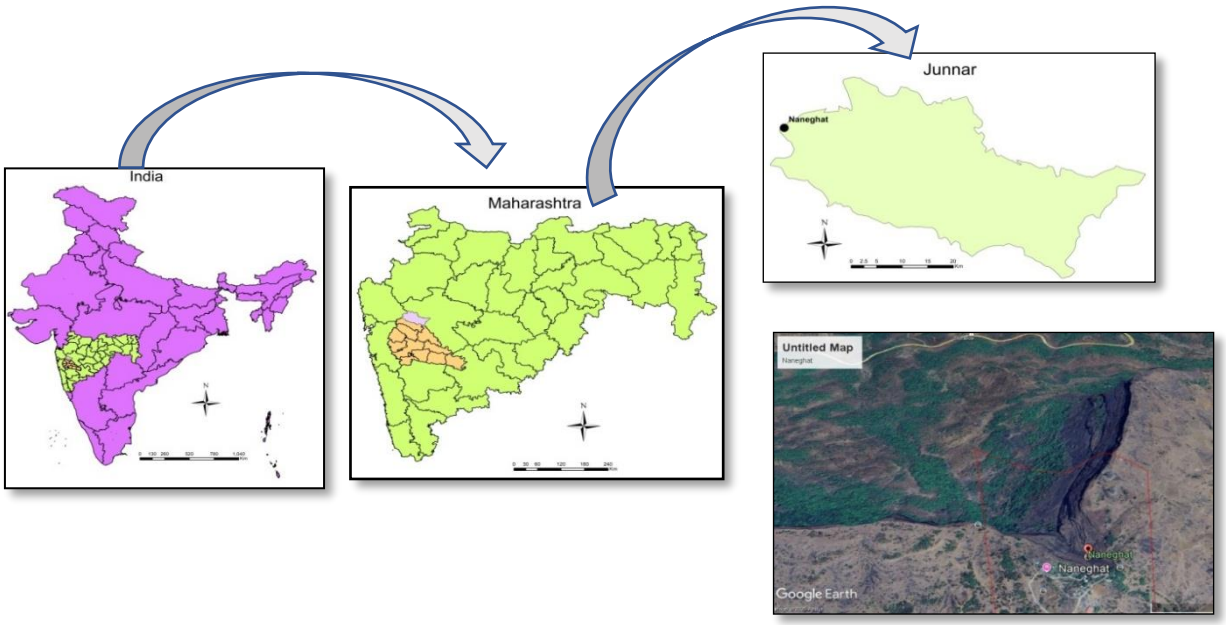
profoundly embedded in several areas of society (Ferraro & Hanauer, 2014; Makindi, 2016; Sirivongs & Tsuchiya, 2012). The International Ecotourism Society (TIES) defines ecotourism as "ethical travel to natural areas that help the well-being of local people and conserves the environment." Thus, the essence of ecotourism consists primarily of (i) a nature-based solution; (ii) a sustainability dimension from the standpoint of conservation; (iii) a sustainable human factor considering local people's participation and benefits; (iv) learning, education, and awareness; and (v) ethical marketing and business management of indigenous products. Furthermore, it serves as a "human shield" by deterring negative externalities like mining, logging, and poaching (Ouboter, Kadosoe, & Ouboter, 2021). Thus, ecotourism has been seen in the travel industry as a lifestyle, a collection of activities, and a set of principles if properly planned and performed (Honey, 2008). Ecotourism contributes to biodiversity conservation by generating revenue for protection projects, providing economic incentives for local communities to protect their environment, and raising awareness among both travelers and locals about the importance of conservation. It helps fund conservation efforts like habitat restoration and endangered species protection, and can deter illegal activities like poaching and logging by increasing local stewardship and law enforcement presence.

This study seeks to analyze the role of ecotourism in biodiversity conservation, focusing on how sustainable tourism practices contribute to ecological balance and economic stability. By examining data from the years 2019–2025**,** including tourist numbers, deposit amounts, and conservation-related costs, the research aims to identify trends, opportunities, and challenges associated with ecotourism initiatives

Study Area:

Junnar Tehsil is a tehsil of the Pune district in the Indian state of Maharashtra. It is northernmost tehsil of the pune District. Junnar Tehsil is an important tourist destination. Junnar was declared the first tourism tehsil in Pune district by the government of Maharashtra on 9 January 2018. An ancient place called Naneghat is there. It is known for historical evidence that was written in Bramhi Lipi, on the walls of the caves.



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Naneghat, also referred to as **Nanaghat** or **Nana Ghat** is a mountain pass in the Western Ghats range between the Konkan coast and the ancient town of Junnar in the Deccan plateau. Nanaghat pass stretches over the Western Ghats, through an ancient stone laid hiking trail to the Nanaghat plateau. The pass was the fastest key passage that linked the Indian west coast seaports of Sopara, Kalyan and Thane with economic centers and human settlements in Nasik, Paithan, Ter and others, according to Archaeological Survey of India. Near the top is large, ancient manmade cave. On the cave's back wall are a series of inscriptions, some long and others short. The high point and cave is reachable by road via Highways 60. The cave archaeological site is about 120 kilometres (75 mile) north of Pune and about 165 kilometres (103 mile) east from Mumbai. The Naneghat Cave is near other important ancient sites. It is, for example, about 35 kilometres (22 mile) from the Lenyadri Group of Theravada Buddhist Caves and some 200 mounds that have been excavated near Junnar, mostly from the 3rd-century BCE and 3rd - century CE period. The closest station to reach Naneghat is Kalyan station which lies on the Central Line.

The latitudinal extension of Naneghat Junnar tehsil is between 19°17’31.0’’ North and the meridional extension is up to 73°40’33.5’’East.

Objective:

1. To explore how ecotourism contributes to biodiversity conservation.
2. To analyze the trends in tourist visits and conservation funding from 2019–2025.
3. To assess how ecotourism supports sustainable livelihood alternatives for local populations.

Database and Methodology :

This study is based on a quantitative analysis of secondary data collected from the years 2019–2025, including the number of tourists, deposit amounts, and conservation costs related to ecotourism activities. The study area has been travelled thoroughly to assess the ground realities. Extensive fieldwork has been carried out in study region to collect data regarding present tourist places. The data were analyzed to identify trends and relationships between tourism growth, revenue generation, and biodiversity conservation efforts. Descriptive statistical methods such as percentage change and trend analysis were used to interpret variations over the years. Graphical representations were employed to visualize the data patterns. In addition, relevant literature and case studies were reviewed to support the interpretation of findings and to compare local results with broader ecotourism practices.

Table-1 : The number of tourists visiting Naneghat previous six year data

Year	Number of tourists visited	Deposit Amount	Cost (Rs)
2019-20	131646	425941	172500
2020-21	24768	121820	98194
2021-22	32921	16960	148530
2022-23	126523	401670	7600
2023-24	156290	759200	221958
2024-25	128501	513044	341030

Source : Naneghat Gram panchayat (fieldwork, 2024-25)

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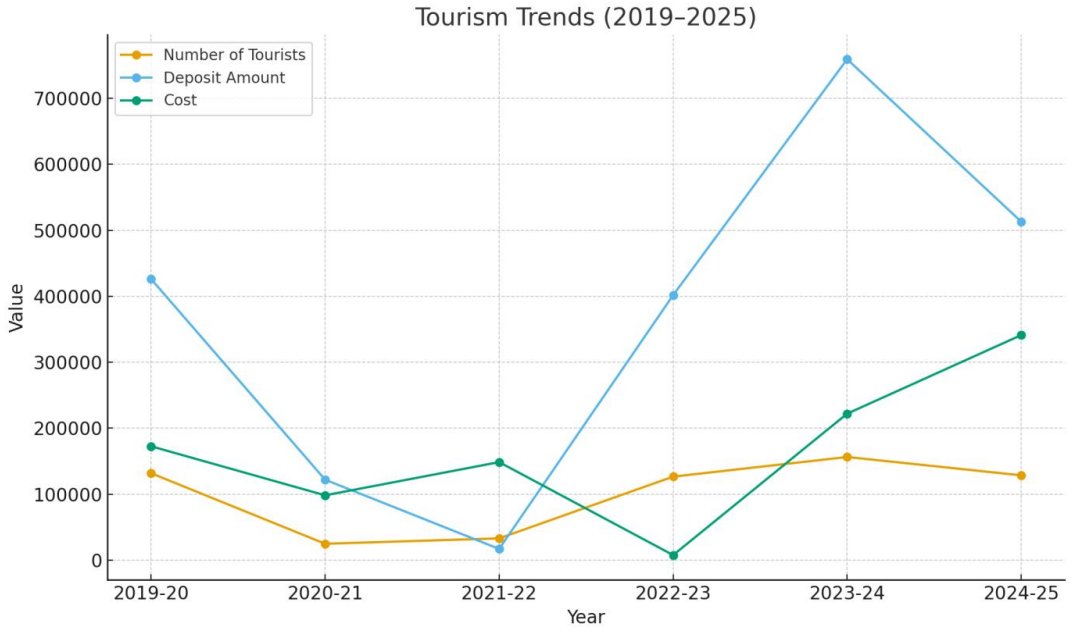
This information has been obtained from Naneghat Gram Panchayat. The inflex of tourists of Naneghat is seen during the monsoon season. The period is generally between may and January. During this period, the number of tourists visiting here is high. Meanwhile, a toll is levied on tourists coming through the Gram panchayat here based on the number of tourists and for their vehicles. In return, they provided with parking facilities. Tourists continue to come here even after January, but their records are not kept by the gram panchayat because the number of visitors is less at that time, so due to the decrease in their income. Therefore, the funds kept for the salaries of the people hired for work cannot be paid. During the monsoon era, the gram panchayat here organized the 'Tribal Forest Festival' to attract tourist. In this festival seasonal vegetables and various food items made from them, as well as medicinal plants, would have been exhibited. After January, some trekking groups organize events like rappelling, valley crossing. Due to this, there is an influx to tourist there. This provides employment opportunities to the local people there. Therefore good living facilities are available there and the hotel business is also growing.



The analysis of tourism data from 2019–20 to 2024–25 reveals significant fluctuations influenced by global and regional factors. The number of tourists showed a sharp decline in 2020–21, likely due to the COVID-19 pandemic and related travel restrictions. However, a gradual recovery began in 2021–22, reaching its peak in 2023–24 with over 156,000 visitors, followed by a slight decline in 2024–25. The deposit amount followed a similar trend, decreasing drastically during the pandemic years and then rising sharply during the recovery period, reaching its highest value in 2023–24 (₹7.59 lakh). This suggests a strong correlation between tourist numbers and revenue inflows, indicating that higher visitor volumes directly contribute to increased deposits. In contrast, the cost data displayed irregular variations. A steep fall in 2022–23 was followed by a significant rise in the next two years, possibly reflecting changes in operational expenses, infrastructure investments, or inflation. Overall, the findings indicate that the tourism sector

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experienced a clear recovery after the pandemic slump, supported by rising tourist arrivals and increasing financial inflows. However, the volatility in cost patterns highlights the need for better expenditure management and sustainable planning to maintain steady growth in the future.

The analysis of tourism trends between 2019–20 and 2024–25 reveals how ecotourism can actively support biodiversity conservation. The steady increase in tourist numbers and deposit amounts after 2021–22 indicates growing participation in nature-based tourism and enhanced financial contributions to conservation programs. Rising operational costs in recent years may reflect increased investment in eco-friendly infrastructure and habitat maintenance. These findings suggest that when properly managed, ecotourism not only promotes environmental awareness among visitors but also generates essential economic resources for sustaining protected areas. Thus, the observed growth in tourism and related revenue demonstrates a positive linkage between ecotourism development and biodiversity conservation efforts.

The analysis of tourism data from 2019–20 to 2024–25 indicates that ecotourism significantly supports sustainable livelihood alternatives for local communities. The steady growth in tourist arrivals and deposit amounts after 2021–22 reflects increased income generation through tourism-related activities such as guiding, hospitality, and handicrafts. Rising operational costs in the later years suggest reinvestment in local infrastructure and capacity-building programs, contributing to long-term employment stability. These trends highlight that ecotourism not only provides economic opportunities but also fosters community empowerment and environmental responsibility. Therefore, ecotourism serves as an effective instrument for promoting sustainable rural livelihoods while maintaining the ecological integrity of tourist destinations.

The tourism data from 2019–20 to 2024–25 reveal both the challenges and opportunities in implementing ecotourism practices. The drastic decline in tourist arrivals and deposits during 2020–21 exposed the sector's vulnerability to global disturbances, while fluctuating costs highlight the need for better financial and operational planning. Nevertheless, the strong recovery in subsequent years demonstrates the potential of ecotourism as a tool for economic diversification and community empowerment. Increased deposits and investment indicate growing opportunities for funding conservation and improving local livelihoods. To harness these benefits, effective policy support, equitable revenue-sharing, and community training are essential. Therefore, while ecotourism faces obstacles of management, capacity, and stability, it also presents a promising avenue for achieving sustainable environmental and socio-economic outcomes.

The analysis of tourism data from 2019–20 to 2024–25 demonstrates a clear relationship between ecotourism growth and biodiversity conservation potential. The steady increase in tourist arrivals and deposit amounts after the pandemic years reflects a revival of interest in nature-based tourism. The observed rise in deposit amounts during the recovery period (2022–2024) indicates that ecotourism provides a sustainable economic mechanism for supporting conservation activities. Revenues generated through park fees, guided tours, and community-based lodges can be reinvested into biodiversity protection programs, anti-poaching patrols, and habitat restoration efforts. Such financial linkages have been widely documented in successful ecotourism models across countries like Costa Rica and Nepal, where tourism income directly supports conservation budgets (Stronza & Gordillo, 2008). At the same time, the increase in operational costs in 2024–25 suggests greater investment in maintaining ecological infrastructure and visitor

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management systems. This trend reflects the principle of sustainable yield tourism, which seeks to balance environmental preservation with economic benefits. However, rapid increases in tourist numbers may also pose ecological challenges such as habitat disturbance, waste generation, or resource overuse, as highlighted by Buckley (2012). Therefore, effective policy frameworks, visitor monitoring, and community participation are essential to ensure that tourism growth remains ecologically sustainable. Ecotourism contributes positively to biodiversity conservation when managed responsibly. The correlation between increased visitation, financial deposits, and conservation expenditure demonstrates that ecotourism can act as both a conservation funding tool and a social awareness mechanism. Future management strategies should focus on maintaining this balance by promoting low-impact tourism, equitable benefit sharing, and long-term ecological monitoring.

Conclusion:

The study reveals that ecotourism plays a significant role in promoting biodiversity conservation when developed and managed sustainably. The analysis of data demonstrates that increased tourist arrivals and higher deposit amounts are directly linked to the economic strengthening of the ecotourism sector. These financial inflows can provide vital support for conservation projects, community livelihood programs, and environmental education initiatives. The upward trend in both tourism participation and conservation-related expenditure suggests that stakeholders are investing more resources in protecting natural habitats and improving eco-friendly infrastructure. However, the fluctuations in costs and visitor numbers highlight the importance of maintaining an ecological balance between economic development and environmental protection.

Overall, the findings affirm that ecotourism can serve as a dual instrument-supporting biodiversity preservation while enhancing local socio-economic development-provided that growth is carefully monitored and guided by sustainable management principles. Ecotourism provides viable and sustainable livelihood alternatives for local populations. When managed through community participation, fair revenue distribution, and environmental stewardship, ecotourism not only diversifies rural economies but also enhances social resilience and ecological awareness. Thus, the dataset reinforces the broader argument that sustainable ecotourism is both an economic and social development strategy, aligning conservation with community well-being. While ecotourism provides a platform for community empowerment, job creation, and conservation funding, its sustainability depends on equitable benefit-sharing and sound institutional support. The findings indicate that without adequate local participation, capacity building, and transparent governance, the benefits of ecotourism may remain unevenly distributed. Conversely, when managed inclusively, ecotourism offers an opportunity to integrate economic resilience, cultural preservation, and environmental stewardship into a unified model of sustainable development.

Recommendations:

1. **Strengthen Community Participation and Ownership**-Empower local residents through participatory management, training, and decision-making in ecotourism projects. This ensures equitable benefit distribution and stronger local commitment to conservation.
2. **Enhance Financial Transparency and Revenue Reinvestment**-Develop mechanisms to ensure that tourism-generated revenues (deposits) are reinvested into local livelihoods, infrastructure, and conservation programs.
3. **Build Resilience Against External Shocks**-Diversify local income sources and promote off-

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season tourism activities to reduce dependence on seasonal or global tourism fluctuations.

4. **Capacity Building and Skills Development**-Conduct regular training programs for local communities in sustainable hospitality, waste management, environmental education, and small business management.
5. **Policy Integration and Institutional Support**-Strengthen coordination between government agencies, NGOs, and private sectors to create supportive policy frameworks that align tourism growth with ecological conservation.
6. **Monitoring and Evaluation Systems**-Establish continuous monitoring of environmental impacts, community benefits, and financial flows to assess the long-term sustainability of ecotourism projects.
7. **Promote Environmental Awareness Among Tourists**-Introduce educational campaigns and responsible visitor programs to minimize ecological footprints and encourage pro-conservation behaviour.

The study concludes that the success of ecotourism depends on the ability to transform challenges into opportunities through adaptive management, participatory governance, and consistent reinvestment in both people and the environment. By addressing these areas, ecotourism can evolve into a resilient, inclusive, and sustainable approach that balances economic growth with biodiversity conservation and community welfare.

References:

1. *Ferraro, M.M. Hanauer Quantifying causal mechanisms to determine how protected areas affect poverty through changes in ecosystem services and infrastructure Proceedings of the National Academy of Sciences, 111 (11) (2014), pp. 4332-4337*
2. *D.A. Ouboter, V.S. Kadosoe, P.E. Ouboter Impact of ecotourism on abundance, diversity and activity patterns of medium-large terrestrial mammals at Brownsberg Nature Park, Suriname PLoS One, 16 (6) (2021), Article e0250390*
3. *G. Poyyamoli Ecotourism policy in India: Rhetoric and reality*
4. *Grassroots Journal of Natural Resources, 1 (1) (2018), pp. 46-61*
5. *Amanda Stronza, Javier Gordillo, Community views of ecotourism Annals of Tourism Research Volume 35, Issue 2, April 2008, Pages 448-468*
6. *Ralf Buckley, Ecotourism and Practices (CABI) ebook*

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