

## **“Tourism and Wildlife Conservation in Central India: A Critical Study of National Parks and Wildlife Sanctuaries in Madhya Pradesh”**

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### **Abstract**

Wildlife tourism has become an increasingly important mechanism for biodiversity conservation, environmental awareness, and local economic development globally.<sup>1</sup> In India, Madhya Pradesh holds a pivotal role due to its extensive forest cover, ecological diversity, and concentration of protected areas, including national parks and wildlife sanctuaries such as Kanha, Bandhavgarh, Pench, Panna, and Satpura.<sup>2</sup> While tourism is promoted as a tool for generating conservation funds and employment,<sup>3</sup> its rapid expansion within protected areas has raised concerns regarding ecological disruption, human–wildlife conflict, and regulatory enforcement.<sup>4</sup>

This paper critically evaluates the impacts of tourism on wildlife conservation in Madhya Pradesh, considering ecological, socio-economic, and legal dimensions. Using doctrinal analysis of laws, policies, and judicial pronouncements, alongside secondary data from government and conservation reports,<sup>5</sup> the study explores whether tourism functions as a facilitator or a threat to wildlife conservation. The findings indicate that although tourism contributes positively to conservation financing and public awareness,<sup>6</sup> unregulated tourism, inadequate infrastructure planning, and weak enforcement mechanisms undermine sustainable outcomes.<sup>7</sup> The study concludes that a balanced, law-driven, and community-inclusive framework is essential to harmonise tourism development with long-term wildlife conservation objectives.

### **1. Introduction**

Wildlife conservation has emerged as one of the most pressing environmental challenges in the twenty-first century.<sup>8</sup> Anthropogenic pressures, including deforestation, urbanisation, climate change, and illegal wildlife trade, have accelerated biodiversity loss worldwide.<sup>9</sup> Protected areas such as national parks and wildlife sanctuaries are central to mitigating these threats.<sup>10</sup> However, the expansion of tourism in these areas introduces both opportunities and challenges for conservation.<sup>11</sup>

Madhya Pradesh, located in the central Indian landscape, is often referred to as the “Heart of India” due to its ecological connectivity and forest cover.<sup>12</sup> Its protected areas harbour diverse flora and fauna and provide critical ecological services such as climate regulation, water recharge, and soil conservation.<sup>13</sup> Over the past two decades, Madhya Pradesh has witnessed rapid growth in wildlife tourism.<sup>14</sup> While this has facilitated revenue generation, local employment, and conservation awareness, it has also contributed to habitat disturbance, human–wildlife conflict, and infrastructural pressures.<sup>15</sup>

This paper examines the dual role of tourism in Madhya Pradesh’s protected areas, critically assessing whether it supports or undermines wildlife conservation.

## **2. Conceptual Framework: Wildlife Tourism and Conservation**

Wildlife tourism refers to recreational, educational, and experiential tourism activities centred on observing and engaging with wildlife in their natural habitats.<sup>16</sup> Unlike consumptive forms of tourism such as hunting or resource extraction, wildlife tourism is largely non-consumptive and is often promoted as a conservation-friendly alternative.<sup>17</sup>

From a conservation perspective, wildlife tourism is frequently justified on the grounds that it can generate financial resources for protected area management, create sustainable livelihood opportunities for local communities, and enhance public awareness regarding biodiversity conservation.<sup>18</sup> Sustainable tourism theory emphasises minimal ecological disturbance, long-term environmental sustainability, and community participation.<sup>19</sup> However, conservation science cautions that even non-consumptive tourism can disrupt wildlife behaviour, reduce breeding success, and degrade habitats.<sup>20</sup> Consequently, wildlife tourism must be critically evaluated rather than presumed to be inherently beneficial.

## **3. Protected Areas in Madhya Pradesh: Ecological Significance Growth of Wildlife Tourism in Madhya Pradesh**

Madhya Pradesh hosts one of the largest forested areas in India, with extensive national parks and wildlife sanctuaries.<sup>21</sup> National parks such as Kanha, Bandhavgarh, and Pench are internationally recognised for their tiger populations and biodiversity richness.<sup>22</sup> These protected areas provide vital ecosystem services, including carbon sequestration, climate regulation, and soil conservation.<sup>23</sup>

#### **4. Protected Areas in Madhya Pradesh: Ecological Significance Growth of Wildlife Tourism in Madhya Pradesh**

Wildlife tourism in Madhya Pradesh has witnessed significant growth due to improved infrastructure, enhanced accessibility, and targeted tourism promotion by state authorities.<sup>24</sup> Safari-based tourism has emerged as the dominant form, supported by eco-resorts, guided tours, and interpretation centres.<sup>25</sup> Revenue generated through tourism has contributed to park management, habitat restoration, and anti-poaching operations.<sup>26</sup>

However, the rapid expansion of tourism has also resulted in overcrowding, increased vehicular movement, noise pollution, and pressure on fragile ecosystems, raising serious sustainability concerns.<sup>27</sup>

#### **5. Positive Impacts of Tourism on Wildlife Conservation**

##### **5.1 Financial Support for Conservation**

Tourism-generated revenue plays a crucial role in supporting wildlife conservation by providing financial resources for a wide range of management and protection activities within protected areas. Such revenue is utilised for habitat restoration initiatives, including grassland management, water resource development, and ecological regeneration of degraded forest areas. It also enables the strengthening of surveillance infrastructure through the procurement of patrol vehicles, communication systems, camera traps, and monitoring equipment, thereby enhancing the capacity of forest authorities to prevent poaching and illegal activities. Additionally, tourism funds contribute to the training and capacity building of frontline staff, including forest guards and wildlife managers, equipping them with the skills and resources necessary for effective conservation governance. Furthermore, a portion of tourism revenue is often allocated to conservation-oriented research, supporting scientific studies on wildlife populations, habitat use, and ecological impacts, which inform evidence-based policy decisions and adaptive management strategies.<sup>28</sup>

##### **5.2 Employment and Livelihood Opportunities**

Wildlife tourism plays a significant role in generating employment and livelihood opportunities for local and indigenous communities residing in and around protected areas. It provides direct employment in a range of tourism-related activities, including wildlife guiding, safari driving, eco-tourism operations, hospitality services, nature interpretation, park maintenance, and forest protection support roles. These opportunities are particularly important in remote and forest-dependent regions where alternative sources of income are limited and economic vulnerability is high.

In addition to direct employment, wildlife tourism creates substantial indirect and induced livelihood opportunities. Local communities benefit through ancillary economic activities such as the supply of agricultural produce and forest-based goods to eco-resorts, operation of local transport services, sale of handicrafts and traditional art forms, and engagement in small-scale businesses catering to tourists. The multiplier effect of tourism income thus contributes to local economic development and enhances household income security.

A key conservation benefit of tourism-based livelihoods lies in their potential to reduce dependence on forest resources for subsistence activities such as fuelwood collection, grazing, shifting cultivation, and extraction of minor forest produce. By offering alternative income streams, wildlife tourism can alleviate anthropogenic pressure on protected ecosystems and reduce instances of illegal resource extraction. This, in turn, supports habitat preservation and wildlife protection objectives.

From a governance perspective, livelihood opportunities linked to wildlife tourism can strengthen community support for conservation initiatives. Where local communities are meaningfully involved in tourism planning, benefit-sharing mechanisms, and decision-making processes, tourism can foster a sense of ownership and stewardship over natural resources. Such participatory approaches align with contemporary conservation policy frameworks that emphasise inclusive and people-centred conservation models.<sup>29</sup>

However, the employment potential of wildlife tourism is not without limitations. Jobs created through tourism are often seasonal, low-paid, and concentrated in specific skill categories, limiting their capacity to provide long-term economic security. Moreover, unequal distribution of benefits, dominance of private operators, and exclusion of marginalised groups can undermine the social sustainability of tourism-based livelihoods. These challenges highlight the need for equitable benefit-sharing frameworks, skill development programmes, and legal safeguards to ensure that wildlife tourism contributes meaningfully to both conservation and social justice.

### **5.3 Awareness and Political Attention**

High levels of tourist visibility in protected areas often translate into increased political and administrative attention towards wildlife conservation and park management. Popular wildlife destinations that attract substantial numbers of domestic and international visitors tend to receive heightened scrutiny from policymakers, senior bureaucrats, and enforcement agencies, as their visibility places conservation outcomes under public and media observation. This increased attention can result in improved allocation of financial resources, prioritisation of conservation initiatives, and greater institutional support for protected area management.

Moreover, wildlife tourism destinations frequently become focal points for conservation-related policy interventions, monitoring programmes, and administrative reforms. The presence of tourists and global visibility associated with flagship species such as tigers often compel governments to demonstrate commitment to conservation through strengthened enforcement, infrastructure investment, and periodic review of management practices. In several instances, heightened political attention has also facilitated inter-departmental coordination between forest, tourism, and local governance authorities, contributing to more structured conservation planning and regulatory oversight.<sup>30</sup>

## **6. Negative Impacts of Tourism on Wildlife Conservation**

### **6.1 Habitat Disturbance and Wildlife Stress**

Vehicular traffic and sustained human presence associated with wildlife tourism significantly disturb natural wildlife behaviour and impose physiological and psychological stress on animal populations within protected areas. Frequent movement of safari vehicles, particularly during peak tourist seasons, alters normal activity patterns of wildlife by interrupting feeding, resting, and mating behaviours. Noise pollution, engine vibrations, and close human proximity can heighten stress responses among animals, leading to increased vigilance, avoidance behaviour, and displacement from preferred habitats.

Such disturbances are especially detrimental during critical biological periods such as breeding, nesting, and rearing of offspring. Repeated human interference in core habitats may reduce breeding success, disrupt parental care, and affect survival rates of juveniles. Scientific studies have demonstrated that chronic stress caused by persistent tourism-related disturbances can suppress reproductive hormones and weaken immune responses, thereby affecting long-term population viability.

From a conservation and governance perspective, unregulated vehicular access and excessive tourist density often reflect inadequate enforcement of carrying capacity norms, zoning regulations, and time restrictions prescribed under wildlife management guidelines.<sup>31</sup> The cumulative impact of these disturbances not only undermines ecological integrity but also challenges the foundational objective of protected areas—to provide secure and undisturbed habitats for wildlife. Consequently, mitigating habitat disturbance and wildlife stress requires strict regulation of tourist movement, enforcement of visitor limits, and adoption of science-based management practices to balance tourism activities with conservation priorities

## **6.2 Infrastructure Development and Habitat Fragmentation**

The expansion of tourism-related infrastructure in and around protected areas has emerged as a significant driver of habitat fragmentation and ecological disruption. The construction of roads, resorts, lodges, parking facilities, and ancillary tourism infrastructure often leads to the physical division of contiguous forest landscapes, thereby restricting natural wildlife movement and altering habitat connectivity. Such fragmentation is particularly harmful for wide-ranging species, including large carnivores, which depend on extensive and uninterrupted territories for hunting, breeding, and dispersal.

Infrastructure development near core and buffer zones increases the frequency of human–wildlife interactions by bringing human activity closer to wildlife habitats. Roads and tourist facilities act as barriers to animal movement, forcing wildlife to cross human-dominated spaces, which elevates the risk of road accidents, injuries, and mortality. Fragmented habitats also push wildlife into agricultural fields and human settlements in search of food and water, intensifying incidents of crop damage, livestock predation, and human–wildlife conflict.

From a legal and regulatory standpoint, unchecked infrastructure development often reflects inadequate enforcement of land-use regulations, eco-sensitive zone notifications, and zoning provisions under wildlife and environmental laws. In several instances, tourism-driven construction in buffer zones undermines the ecological purpose of these areas, which are intended to function as transition zones that absorb anthropogenic pressure and protect core habitats.<sup>32</sup> Consequently, habitat fragmentation caused by tourism infrastructure not only threatens wildlife survival but also exacerbates social conflict and governance challenges, underscoring the need for strict regulation, impact assessment, and ecologically sensitive planning of tourism-related development.

## **6.3 Pollution and Waste Management**

Poor waste management associated with wildlife tourism significantly contributes to ecosystem degradation and poses serious risks to wildlife health within and around protected areas. The accumulation of solid waste, including plastic packaging, food waste, and non-biodegradable materials generated by tourists and tourism facilities, contaminates forest landscapes, water bodies, and soil systems. Such pollution disrupts natural ecological processes, degrades habitat quality, and undermines the environmental integrity of protected ecosystems.

Wildlife is particularly vulnerable to improperly managed waste. Animals may ingest plastic and food waste, leading to choking, intestinal blockages, malnutrition, or death. The presence of waste also alters natural foraging behaviour, causing wildlife to associate human activity with

food availability, which increases dependency, aggressive encounters, and the likelihood of human–wildlife conflict. In addition, decomposing waste attracts invasive species and scavengers, thereby disturbing trophic balance and facilitating the spread of disease within wildlife populations.

From a regulatory and governance perspective, inadequate waste management reflects weak enforcement of environmental norms, insufficient monitoring of tourism facilities, and limited accountability of private operators. Failure to implement segregation, recycling, and scientific disposal mechanisms contravenes sustainable tourism principles and environmental protection standards applicable to protected areas.<sup>33</sup> Addressing waste-related impacts requires the adoption of strict waste management protocols, visitor education programmes, and coordinated oversight by forest, tourism, and local governance authorities to safeguard ecosystem health and wildlife well-being.

## **7. Legal and Policy Framework Governing Wildlife Tourism**

Wildlife tourism in India is regulated under the *Wildlife (Protection) Act, 1972*, the *Forest (Conservation) Act, 1980*, and allied environmental regulations. Judicial interventions, including *Centre for Environmental Law, WWF-India v. Union of India*, have reaffirmed that conservation must take precedence over unregulated tourism.<sup>34</sup> Guidelines issued by the National Tiger Conservation Authority and the Ministry of Environment, Forest and Climate Change mandate zoning, visitor limits, and eco-sensitive practices.<sup>35</sup>

## **8. Conclusion**

Tourism plays a complex and inherently dual role in wildlife conservation in Madhya Pradesh, functioning simultaneously as a source of conservation support and as a potential driver of ecological stress. On the one hand, wildlife tourism has contributed significantly to conservation financing through park entry fees, safari permits, and tourism-related revenues, which are utilised for habitat management, anti-poaching measures, infrastructure development, and staff capacity building. It has also enhanced public awareness regarding wildlife protection and biodiversity values, while generating livelihood opportunities for local communities residing in and around protected areas, thereby creating economic incentives to support conservation efforts.<sup>36</sup>

On the other hand, the rapid and often inadequately regulated expansion of tourism has exposed serious governance and sustainability challenges. Uncontrolled tourist inflows, excessive vehicular movement, commercialisation of wildlife experiences, and infrastructure development in ecologically sensitive zones have resulted in habitat disturbance, wildlife stress, behavioural



disruptions, and increased human–wildlife conflict. These adverse impacts are further aggravated by weak enforcement of existing legal and policy frameworks, administrative capacity constraints, and competing revenue-driven interests that undermine conservation priorities.

In this context, a balanced and integrated approach becomes imperative. Wildlife tourism must be firmly grounded in strict legal compliance, science-based management practices such as carrying capacity assessment and zoning, and continuous ecological monitoring. Equally essential is the meaningful participation of local and indigenous communities in decision-making processes and benefit-sharing mechanisms, as exclusionary conservation models risk social inequity and long-term resistance. Only through a holistic framework that harmonises conservation objectives with socio-economic considerations can wildlife tourism in Madhya Pradesh contribute positively and sustainably to long-term biodiversity conservation and environmental governance.

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