

## **Ecotourism and Wildlife Conservation: Evaluating the Balance between Tourism Development and Wildlife Protection in Sariska National Park**

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### **Abstract**

One of the industries with the quickest rate of growth before COVID-19 was introduced was ecotourism. It's a completely different way of looking at things. A sustainable visit to an ecosystem that preserves the environment, advances the welfare of the local population, and involves providing interpretation and instruction for both visitors and staff is known as ecotourism.

The Rajasthan district of Alwar is home to the Sariska National Park. For the Royal Bengal Tigers, it is renowned worldwide. There are also plenty of other wild animals, including monkeys, different species of birds, pythons, palm civets, jackals, sloth bears, and striped hyenas.

The term "ecotourism" is most frequently used in the modern world. It's a completely different perspective on the world. A sustainable visit to an ecosystem that preserves the environment, enhances the welfare of the local population, and offers staff and visitors alike explanation and education is known as ecotourism.

On the one hand, ecotourism brought in money to support conservation efforts and gave residents jobs. Contrarily, ecotourism is to blame for modifications to the physiology and behavior of wild animals, the loss of their habitat, biological invasions, alteration of their eating patterns, and, in certain situations, the spread of illness. Ecotourists and individuals in the hospitality sector often introduce non-native species, such as dogs and cats. They could be extremely harmful to creatures that are natural prey. Ecotourists have the capacity to disperse parasites and diseases that could be fatal.

This report examines the current state of ecotourism in Sariska National Park, the likely effects it has on wildlife, and offers recommendations for improving ecotourism's benefits to wildlife.

**Keywords:** ecotourism, ecosystems, environment, conservation, and Sariska National Park

### **Introduction**

Accountable travel to ecosystems that helps preserve the environment, maintains the welfare of those who live there and comprises analysis and education," as defined by TIES (2015), is what ecotourism

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## **Ecotourism and Wildlife Conservation: Evaluating the Balance between Tourism Development and Wildlife Protection in Sariska National Park**

*Prof. C.V. Dhabariya & Nisha Pareta*

is all about. The only difference is that the education is intended for both staff and guests. According to Moreno (2005), nature tourism refers to the organized observation of wildlife. The fact that nature enthusiasts must pay a high price to view animals both locally and globally incentivizes wildlife viewing as a means of generating income for travel agencies.

Groom et al. (1999) assessed the contribution of ecotourism to raising community awareness of the need of wildlife conservation after examining the sustainable use of wildlife in Peru's Manu Biosphere Reserve and Puero Maldonado National Parks.

One of the industries with the quickest growth rates in the current ten years is tourism, especially international travel. International visitor arrivals increased by 5% in 2018, hitting 1.4 billion, according to UNWTO (2019). This growth was attributed to an increasing middle class in developing nations, technology advancements, affordable journey, innovative companies, and easy visa facilitation. From 664 million foreign visitors in 1999 to 1.4 billion in 2019, the number of arrivals rose. However, the COVID-19 pandemic in 2020 had a negative impact on tourism.

Humans possess a great desire to see the world, experience other cultures firsthand, and discover other lifestyles. According to its definition, ecotourism is "responsible travel to natural areas that involves interpretation and education, conserves the environment, and sustains the health and happiness of the local people.

### **Research Space**

In Rajasthan's Alwar District is the tiger reserve known as Sariska National Park. It covers 881 km<sup>2</sup> and is made up of grasslands, rocky slopes, dry deciduous forests, and scrub-thorn desert forests. The park, which has a total area of roughly 273.8 km<sup>2</sup>, was first established as a tiger reserve in 1978 and then later classified as a national park in 1990. Sariska holds special significance being the world's first reserve where tigers have been successfully moved.

### **Techniques**

The secondary data that form the basis of this investigation. Every piece of material was gathered from a variety of sources, such as periodicals, books, the internet, journals, the Ministry of Forests, the Ministry of Tourism, and newspapers.

### **Sariska National Park Fauna**

The reserve is home to a wide range of wildlife, including Javan mongoose, Rhesus macaques, Northern plain grey langurs, Indian leopards, wild boar, small Indian civets, honey badgers, sambar deer, nilgai, jungle cats, Indian hares, chital, ruddy mongoose, and numerous bird species, including treepie, grey partridge, crested serpent eagle, Indian birds of prey, sandgrouse, bush quail, white-throated kingfisher, golden-backed woodpecker, and Indian eagle-owl. All of these species can be

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## **Ecotourism and Wildlife Conservation: Evaluating the Balance between Tourism Development and Wildlife Protection in Sariska National Park**

*Prof. C.V. Dhabariya & Nisha Pareta*

found in the reserve, in addition to Bengal tigers.

Two tigers from Ranthambhore National Park were moved to Sariska Tiger Reserve in July 2008, and another female tiger was moved in February 2009, according to Sanker et al. (2010). There were eighteen tigers in October 2018, including five cubs, according to \*Times of India\* (2018). According to Khati (2020), there were 20 tigers left in the reserve by 2020.

### Sariska Zones

Sariska National Park has two gates and four zones total, covering an area of about 800 square kilometers. The Sariska Gate, the most well-known gate, opens into three zones: Zone 1, Zone 2, and Zone 3. About 80 kilometers from the Sariska Gate, the Telha Gate provides entrance to Zone 4. Better animal sightings are reported in Zones 1, 2, and 3, making the Sariska Gate the favorite option for safaris, according to sighting statistics from Wild Trails.

Zone 1: Offering jeep or canter safaris, this is one of Sariska's most popular areas.

Zone 2: This core zone is less frequented than the others, yet it has a higher probability of seeing wildlife.

Zone 3: Known for amazing wildlife encounters, this zone should be explored by naturalists and visitors alike. It is just as popular for sightings as Zone 1.

Zone 4: Accessed via the Telha Gate, this zone is the least frequented because of its remote location from the other zones.

Tourism Revenue in Saraika National Park (in lacs)

The revenue from tourism at Sariska has been recorded as follows, per the Government of Rajasthan Forest Department's Annual Reports:

**Table 1:** Show the income of year

S. N.	Year	Income (in lacs)
1.	2013-14	15.43
2.	2014-15	21.15
3.	2015-16	38.42
4.	2016-17	39.01
5.	2017-18	40.56
6.	2018-19	41.82
7.	2019-20	70.00

*Source:* Annual Reports

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## Ecotourism and Wildlife Conservation: Evaluating the Balance between Tourism Development and Wildlife Protection in Sariska National Park

*Prof. C.V. Dhabariya & Nisha Pareta*

## Likely Harmful Effect on Wildlife

### Invasion by Biology

When compared to control locations, the abundance and diversity of non-native species are noticeably higher in tourist destinations. An important factor in the proliferation of non-native species is tourism and recreation. People travel to natural places from all over the world, which increases the chance of non-native species spreading from one environment to another (Anderson et al., 2015). This relationship is valid for habitats that are both terrestrial and aquatic.

### Diseases

In the same way that it can enable the introduction of non-native species, ecotourism can serve as a vector for potentially fatal infection and parasites. The desire for up-close experiences with wild monkeys has given rise to a thriving ecotourism industry, which is frequently seen as essential to raising money for conservation initiatives and shielding primates from poachers. Woodford et al. (2002) stress that these advantages must be balanced against the elevated risk of disease transmission, which, in the event that monkeys are housed in close quarters with humans, might have severe effects on wild populations.

Ecotourists may inadvertently bring lethal infections into their surroundings by wearing or wearing boots. In these situations, native populations can quickly become infected with germs or viruses introduced into ecosystems lacking natural resistance. *Phytophthora ramorum*, a fungus that causes abrupt oak death, was more prevalent on heavily traveled trails in central California than it was in off-trail locations, according to research by Ushman et al. (2008). This suggests that human activity is the cause of pathogen spread. Studies conducted in zoos have shown that penguins kept in captivity are particularly vulnerable to a wide range of diseases. Penguins may be more susceptible to illness outbreaks as a result of ecotourism when paired with other stresses like pollution and climate change.

### Repercussions of Food Provisioning

Numerous studies have discovered that chemical pollutants in the air and water, as well as solid waste, pose a threat to animals. According to studies by Kendall et al. (2010), chemical contamination and solid waste represent a serious hazard to animals. According to Rodriguez et al. (2014), some animals are attracted to light pollution, sometimes to the point of death, as demonstrated by nocturnal seabirds, while others are repulsed by it, hence decreasing the amount of habitat that is available. According to Shannon et al. (2016), noise pollution has become a growing source of worry over the past 25 years since it affects a variety of land and marine species.

### Degradation of Habitat

While protecting natural ecosystems is the main goal of ecotourism, granting large numbers of

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## Ecotourism and Wildlife Conservation: Evaluating the Balance between Tourism Development and Wildlife Protection in Sariska National Park

*Prof. C.V. Dhabariya & Nisha Pareta*

individuals access to these locations comes with a number of environmental drawbacks. These expenses cover the use of finite resources including water, building infrastructure, habitat fragmentation, waste from humans, litter, and pollution from chemicals, lights, and noise. All of these things lead to the deterioration of habitat quality, which negatively impacts wildlife, particularly in areas where there is tourism infrastructure. According to Anderson et al. (2015), the biggest risks to biodiversity globally are habitat loss and degradation.

### **Effects of Ecotourism on Wild Animal Physiology and Behavior**

The expansion of short-term behavioral consequences to long-term impacts at the population level has been connected to ecotourism. Cetacean research provides strong evidence for this. Bejder et al. (2006) noted that frequent encounters with dolphins in Shark Bay, Australia, and Fjordland, New Zealand, had caused behavioral alterations in the short term as well as long-term changes in the social structure and local abundance. In a similar vein, Steven et al. (2011) observed that changes in population abundance and distribution resulted from recreationists' behavioral avoidance. According to Braunisch et al. (2011), winter leisure activities in the Swiss Alps resulted in a 36% decrease in black grouse (*Tetrao tetrix*) numbers and a 12% loss in available wintering habitat.

On the other hand, J. Gill et al. (2001) noted that human presence did not always alter the distribution and abundance of shorebirds, such as the black-tailed godwit (*Limosa limosa*), which is believed to be easily disturbed. However, the overemphasis on some species by ecotourists might have an adverse effect on other taxa in a community of organisms. According to Muhly et al. (2011), disturbance-sensitive predators steer clear of human-populated areas, forming a "predator refuge" or "human shield" for species of prey.

According to Geffroy et al. (2015), prey species may become less vigilant as a result of habituation to human activities, which could eventually increase their boldness and leave them more exposed to predators. Bremner et al. (2004) discovered that after being released into the wild, bold conduct in captive-bred fast foxes (*Vulpes velox*) was a significant predictor of mortality. Leighton et al. (2010) [20] pointed out that predator shelters can help endangered prey species, like hawksbill sea turtles (*Eretmochelys imbricata*) in the Caribbean, by reducing the activity of invasive species like the mongooses that prey on hatchlings. However, ecotourists may harm disturbance-sensitive predators.

According to Laurance et al. (2013), by discouraging illicit hunting and logging, human presence can help some wildlife populations. Particularly in locations where ecotourism has raised survival rates of progeny, turtles have flourished. Amsini, F., et al. (2012) showed that law enforcement is the main determinant in the successful maintenance of great apes, with ecotourism and human activity playing a secondary role.

Vehicle collisions are one of the most frequent ways that tourists unintentionally kill wildlife, according to Jones, M. E. (2000). The population of eastern quolls (*Dasyurus viverrinus*) in Tasmania,

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### **Ecotourism and Wildlife Conservation: Evaluating the Balance between Tourism Development and Wildlife Protection in Sariska National Park**

*Prof. C.V. Dhabariya & Nisha Pareta*

for example, increased dramatically after a road connecting to the Cradle Mountain-Lake St Clair National Park was improved. However, vehicle-related mortality led to the regional extinction of the species until it was reintroduced. This is not a unique occurrence; Igginbottom, K. (2000) noted that dangerous species like snakes and mosquitoes are frequently killed by ecotourism in the vicinity of hotels and resorts.

According to research by Kasereka, B., et al. (2006), monkeys kept for tourist viewing are more susceptible to poaching than monkeys who are not. As a result of ecotourism and associated activities, the wildlife in Sariska National Park is probably vulnerable to diseases, physiological and biological alterations, habitat degradation, problems with food provisioning, and biological invasion.

### **Likely Beneficial Effects on Sariska National Park's Wildlife**

In addition to giving visitors the opportunity to see those places for themselves, ecotourism supports conservation initiatives and advances scientific understanding in fragile regions. Ecotourists learn about the biology, geology, and ecosystems of certain natural areas, which helps them with conservation efforts. Reforestation and the repopulation of endangered species are two conservation initiatives that receive a portion of the money generated by ecotourism. It so happens that many of the most breathtaking natural locations on the planet are found in the least developed nations, such as Ecuador, Madagascar, and Nepal. The ecotourism initiatives in these nations are beneficial in terms of supplying financial support. In summary, Sariska National Park's animal protection may benefit from all these beneficial effects.

### **Recommendations**

Ecotourism is a necessary byproduct. The following actions can make it productive for wildlife:

- When planning trips, consider sustainable tourism options.
- Make your hotel green.
- Decrease the carbon imprint you leave behind.
- Reject illicit commerce.
- Encourage island destinations to offer sustainable options.
- Preserve historic sites.
- Set a goal for yourself to venture beyond your comfort zone.
- Encourage community-based travel and related projects.
- Honor the customs of the local populace.
- Make use of reusable bags.
- Take into account options for sustainable travel.

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## **Ecotourism and Wildlife Conservation: Evaluating the Balance between Tourism Development and Wildlife Protection in Sariska National Park**

*Prof. C.V. Dhabariya & Nisha Pareta*

- Remain outside of the city limits.
- Diminish your carbon footprint.
- Oppose illicit trading.
- Preserve historic sites.
- Dine at neighborhood eateries.
- Honor the customs of the local populace.
- Make use of reusable bags.

### Conclusion

Sariska National Park's wildlife may be subject to a variety of ecological consequences as a result of ecotourism and associated activities. The survival, reproductive performance, and long-term viability of many species populations—especially those that are rare, vulnerable to disruption, and geographically isolated—can be significantly impacted by ecotourism, contrary to the overwhelming body of evidence suggesting otherwise. These repercussions are driven by the indirect impact of human presence on disturbance-sensitive species' distribution, abundance, ability to reproduce, and survival. Other direct effects of visitors may include death, the introduction of non-native species, the damage and fragmentation of habitat, the provision of artificial food supplies to enhance sightings of elusive creatures, and the transmission of illness. Notwithstanding the possible drawbacks, tourism is a vital source of funding for conservation and offers worthwhile opportunities for people to learn about biodiversity issues and become advocates for animals.

Without a question, tourism may be a useful tool for effective conservation, but it's crucial to recognize and manage any potential negative consequences of human presence responsibly, especially when combined with a host of other factors that could endanger the long-term existence of animals.

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*Prof. C.V. Dhabariya & Nisha Pareta*

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**Ecotourism and Wildlife Conservation: Evaluating the Balance between Tourism Development and Wildlife Protection in Sariska National Park**

*Prof. C.V. Dhabariya & Nisha Pareta*



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