

Geographic Study of Ranthambore National Park: Obstacles and Remedial Approaches

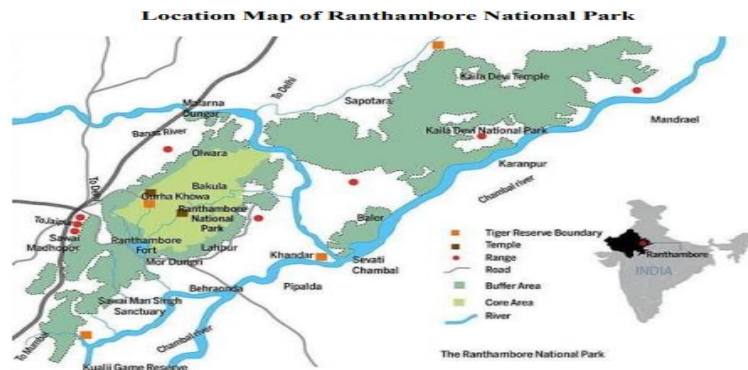
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Abstract

In northern India, one of the biggest and most well-known parks is Ranthambore National Park. Situated approximately 130 kilometers from Jaipur, the park is situated in the Sawai Madhopur district of eastern Rajasthan. Ranthambore National Park, which used to be thought of as the Maharaja of Jaipur's preferred hunting spot, is now home to a wide range of wildlife species and is a popular tourist destination. The geography and history of Ranthambore are the main topics of this research paper. It is essential to comprehend the region's history and geography because they have a big impact on the locals' way of life both culturally and economically.

Introduction

Ranthambore National Park is one of the biggest national parks in northern India and is a part of Rajasthan's main tourism circuit. Though administratively part of Sawai Madhopur district, it is approximately 14 kilometers away. Tigers can be easily sighted there even during the day, making it one of the greatest spots to see the majestic Indian tiger. Ranthambore is a popular wildlife tourism site that draws tourists and photographers from all over the world.



The Vindhya and Aravalli mountain ranges encircle the roughly 1410.64 square kilometre Ranthambore Tiger Reserve, which has substantial wilderness regions. Tropical dry deciduous woods and tropical spiny forests make up the park's vegetation. Water is restricted to small valleys and a few

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lakes, including Padam Talab, Raj Bagh Talab, and Malik Talab, because of the steep terrain. Ranthambore is also well-known for its forts and ruins and is a haven for numerous animal and bird species.

Ranthambore National Park is already a well-liked vacation spot for those seeking jungle experiences. Thousands of tourists from all over the world travel to Ranthambore for jungle safaris during the tourist season (October to April) because of the park's abundance of tigers. "Machli" was the most well-known of Ranthambore's many well-known tigers. Machli passed away in August 2016 after a protracted illness that left her feeble. Despite this, she left behind many stories about her bravery and compassion, which have served as inspiration for countless wildlife documentaries, movies, and television shows. An unforgettable wildlife experience can be had on a jungle safari when you witness endangered species in their own environment.

Objective

1. Become familiar with the layout of Ranthambore National Park.
2. Describe the issues that Ranthambore National Park is now facing.
3. Make suggestions for fixing the issues facing Ranthambore National Park.

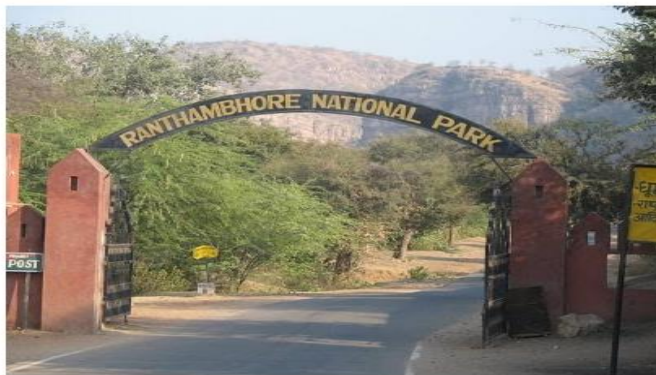
Hypothesis 1. Human activity affects the fauna and plants of Ranthambore National Park.

Information Gathering

Secondary data from both public and private sources, such as the Ministry of Tourism and the District Collectorate Office, are used in this research study.

Geographic Context

In the Sawai Madhopur district of southeast Rajasthan, between latitudes 25°45' and 26°41' N and longitudes 75°59' and 77°00' E, is where you may find Ranthambore. It shares borders with Madhya Pradesh to the south and west, the Tonk district to the west, and the Jaipur area to the northwest. The Sawai Madhopur district has 4498 square kilometers in total.



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Sawai Madhopur's landscape is composed of both undulating plains and undulating, steep areas. Part of the Chambal Valley is covered by the rough, slightly sandy plains to the east and south. The district's north and south are situated between 450 and 600 meters above mean sea level (MSL), making up the Aravalli Hills. In Bamanwas tehsil, "Bhairon" (527 meters above mean sea level) is the highest peak in the northwest Aravalli hills, while "Utgir" is another noteworthy peak in the south. The subdivision's Gangapur area is primarily level with a few broken hills.

Weather

The area has a short-wet season and is described as having a "dry" climate. December through March is winter season, while March through the third week of June is summer season. June through September is considered the rainy season, with an average of 62.28 cm of precipitation every year. In January, the minimum temperature can dip to roughly 3 degrees Celsius, while the highest temperature can reach 40 degrees Celsius every day. During the monsoon season, the relative humidity is approximately 60%; nevertheless, the remaining portion of the year is mostly dry. 19.2°C, or 34.6°F, is the average temperature variation. August has the most humidity (77.50%), while April has the lowest humidity (20.19%). With 19.30 rainy days, August is the wettest month, while November has the fewest rainy days (0.90).

Table 1 : Climatic data of Ranthambore

Months	Avg. Temp. (°C) (°F)	Perceptual Rainfall mm (inch)	Humidity (%)	Rainy Season	Avg. Sun Hrs
January	15.5°C (59.9°F)	10 (0.4)	55%	1	9.1
February	19.3°C (66.7°F)	9 (0.4)	45%	1	9.9
March	25°C (77°F)	6 (0.2)	30%	1	10.7
April	31°C (87.7°F)	4 (0.2)	20%	1	11.5
May	34.7°C (94.5°F)	7 (0.3)	22%	2	12.0
June	33.7°C (92.7°F)	70 (2.8)	40%	6	11.8
July	29.2°C (84.5°F)	226 (8.9)	69%	14	8.9
August	27.5°C (81.5°F)	217 (8.5)	77%	14	7.6
September	28°C (82.5°F)	77 (3)	64%	7	9.4
October	26.7°C (80.1°F)	13 (0.5)	43%	1	10.1
November	22°C (71.6°F)	8 (0.3)	45%	1	9.6
December	17.1°C (62.8°F)	6 (0.2)	54%	1	9.3

Source: Rajasthan census report 2011

Reserve - The Chambal, Morel, and Banas rivers are among the waterways that make up the Sawai Madhopur basin.

Morel - Sawai: passes through the Madhopuri villages of Rorawad, Piplda, Jastana, Shayempura, and

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Mitarpura. The primary tributaries of the Morel River are the Dundee, Cancrawley, and Calisier rivers. There are roughly 5491 square kilometers in the basin overall.

Chambal - Also called the Charmwati River, it is 376 km long in Rajasthan.

Cucumbers - It rises in the Kinno hills of Aravalli (the district of Rajsamand) and runs northeast from Mewar to the village of Rameshwar, where it meets the Chambal. The Matopur towns of Padra, Shyampura, Lollavall, Bagroli, and Sawai pass through.

Ground - Previous era rocks have an impact on the soil formation here. In the Paoli region, Bamangas has ancient alluvial soil. Hard soil and rocky soil are prevalent in hilly places. In the district of Barwara, Melrana, Gangapur, new alluvial soil was discovered. There are laterite and loess soils with high iron content in the west of the area, but they lack nitrogen and biogenic carbon components.

Organic Plant Life - Neem, berries, and other trees (*Ziziphus jujuba*), Dhok (*Anogeissus pendula*), Aranja (*Acacia leucophloea*), Tendu (*Diospyros melanoxylon*), Girjan (*Lannea coromandelica*), Salar (*Boswellia serrata*), Khirmi (*Wrightia tomentosa*), Suncia (*Bauhinia racemosa*), *Syzygium cumini* (Jamun), Bamboo (*Dendrocalamus strictus*), and Pila (*Salvadora persica*) are some of the natural vegetation in the area. *Achyranthes aspera*, *Apluda mutica*, *Heteropogon contortus*, and *Aristida* species are examples of grasses and Grass.

Nature - Numerous birds, reptiles, and other species are also visible, including tigers, sloth bears, medaka, wild dogs (Dhole), leopards, and black panthers. Among the birds are spot grosbeaks, peacocks, coots, owls, comb ducks, nooks, laughing teals, whistling teals, budgies, egrets, lake herons, gray doves, and purple herons.



Problems In Ranthambore National Park And Their Solutions

The majority of the population in the Ranthambore Tiger Reserve is made up of farmers and animal

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breeders. The lions' surrounding habitats are impacted by assaults by wild animals, poaching, etc., and have seen some detrimental repercussions including Although tourism is a significant source of revenue for the local population, many people believe that it is detrimental to the survival of tigers. The protected area's "economic development" is beset by grave issues. The area within a radius of 10 kilometers from the legal zone of the borders has been considered to be the "long" lion's zone of influence (ZI) based on the aforementioned parameters. This is often where the majority of disputes between humans and animals take place.

While there are numerous villages, houses of worship, and a few small churches in every other region of the tiger reserve, there are none in the Ranthambore National Park. Before the area was designated as a protected area, all of these areas were there for a long time.

The ZI can be separated into two additional sections behind the protected area. The first section is the most significant in every way and is located roughly two kilometers from the boundary. These regions mostly rely on woods, and the largest influence comes from protected areas. The region contains 112 settlements. An "ecological development zone" applies to the area. Though this is gradually improving, locals still regard the border as a location for their personal usage and become upset when it is prohibited.

People's expectations of hope diminish when we cross the boundaries of protected areas, yet seasonal reliance on reserves persists. People in the region oppose the border to a very little extent because it is more than two kilometers away and has no discernible negative effects on their lives.

Locals' lives are impacted by protected forests in a variety of ways, which makes the protected area detrimental to them. The primary issue is that development is thought to have been halted by the protected area; for instance, building is prohibited in the blocked protected area near roads, dams, electricity lines, etc. Large-scale business construction is prohibited in the area. When livestock destroy animals and wild animals kill crops, there are financial losses. Natural resource depletion and a negative impact on livelihoods have resulted from limiting access to protected areas for food and other necessities. Locals are prohibited from visiting religious sites within the reserve by park authorities.

Benefits and drawbacks

The management of these impacted places determines survival depending on the protected area. The detrimental effects of protected areas on humans impact the survival of protected areas. Tiger reserves:

The fact that the locals in the border region of Ranthambore are so accepting of wild animals, particularly tigers, is one of its main draws. They make a significant difference and get along nicely with the local wild creatures. The fact that ungulates are destroying crops is their main grievance regarding wildlife. They hardly ever come across poachers killing cattle.

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The following goals have been established in light of the results that were previously identified and prioritized:

Objectives Preserve and enhance Ranthambore Tiger Reserve's environment. ecological, cultural, and aesthetic value.

- Establish ecotourism locations away from the busy places.
- To lower the height of the main area, increase the growth of grass, trees, and other animals in weak regions.
- Relocate villages from the Project Tiger region, enhance the ecosystem in the impacted area, and lessen the detrimental effects of human activity on the protected area.
- Maintain and upgrade current trails to encourage the spread of wildlife.
- Encourage ecological and socioeconomic research to accomplish the aforementioned objectives.
- Building the infrastructure and increasing staff capability through relevant training initiatives.
- Habitat degradation as a result of topsoil erosion and water body siltation

The tiger reserve's unique quality is that no water enters from the outside. Every drop of water crosses the border and enters the ecosystem. Thus, however, P.A. The terrain is shifting. Perpetually lost. This is steadily causing irreversible soil loss in the reserve, along with pressure from grazing and timber harvesting. Long-term effects of this will include less vegetation and changes in vegetation quality, which will have an impact on the area's overall quality as well as the fauna. Two of the main issues are topsoil erosion and siltation of existing water bodies. Because the land is desert, animals may have less access to water when there is a drought.

Distancing of the local population

Ranthambore has seen several developmental phases. The government assumed ownership from the princely states. Because of the state's resource management procedure, locals are growing more and more separated over time. The forest's entrance was previously controlled by the locals. There are restrictions on free access since the Forest and Wildlife Protection Law went into effect. The park has seen an increase in tourism. There are primarily foreign visitors. Of course, after paying the fee, users get access to a lot of features and services. This implies that locals have no rights and that the park was created with tourists in mind.

- As the protected region was being built, the local people were gradually cut off. Twelve villages were relocated to the Ranthambore National Park's slopes.
- The Wildlife Protection Act and the Forest Act of India limit access to forest resources.
- In the forest, gathering small objects is subject to limitations. livestock. While tourists can take

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advantage of all the amenities and advantages, only access to national parks is restricted. There's a growing perception that these parks are intended primarily for visitors from overseas. The park is no longer accountable to the community.

- Crops and livestock are harmed by wild animals. Prosopis Juliflora division

Prosopis juliflora was the preferred tree in Rajasthani agriculture in the past to suit the demands of the state. The growth of cowpea crops near tiger sanctuaries seriously disrupts the ecology. In Sawai Mansingh Sanctuary, Kela Devi Sanctuary, and Ranthambore National Park, Prosopis juliflora is expanding quickly. Sheep and goat grazing aids in the spread of cowpea. Prosopis juliflora is present on about 10,000 hectares of the 1.30 million hectare entire tiger reserve. Regrettably, Prosopis juliflora has experienced historical neglect. It doesn't aid in lowering the height of the forest, which requires healthy trees or little trees for agricultural products, because it grows thickly and has sturdy trunks. Prosopis juliflora is predicted to double in size during the next ten years. 149.5 hectares of fruit trees (Prosopis juliflora) were removed between 1999 and 2000. There have been conflicting outcomes when using local cleaning methods. The attraction of seed propagation persists despite the lack of protection.

Conclusion

Ranthambore National Park, in the center of Rajasthan, is a wildlife haven with an abundance of natural beauty. Ranthambore Safari offers an incredible trip to the country of the invisible tiger for adventurers and wildlife enthusiasts. The renowned Ranthambore safari business, Eye of the Tiger, provides a rare chance to witness these exquisite creatures in their own environment. Like any adventure, though, Ranthambore Safari is not without its difficulties. In order to maximize the benefits of this experience, it's critical to recognize and be ready for the challenges ahead. A full hunting trip includes everything from the complexities of reserving a location to investigating the woods and getting out into the real environment. Visitors can enhance their enjoyment and ease of navigation around the delights of Ranthambore with Tiger's Eye by being aware of these challenges.

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