

WILDLIFE CORRIDORS OF MUKUNDRA HILLS TIGER RESERVE: ENHANCING CONNECTIVITY FOR ENVIRONMENT AND BIODIVERSITY CONSERVATION

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ABSTRACT

The Mukundra Hills Tiger Reserve is a vital habitat for biodiversity conservation and plays a crucial role in preserving the habitat of the majestic tigers. Enhancing connectivity within the reserve through the establishment of wildlife corridors is essential for maintaining genetic diversity, facilitating species movement, and promoting ecosystem resilience. This research paper investigates the significance of wildlife corridors in the Mukundra Hills Tiger Reserve and their contribution to biodiversity conservation and tiger habitat preservation. Various methodologies, including remote sensing and GIS, camera trapping, corridor modeling, scat and pellet collection, stakeholder engagement, and field observations, were employed to identify and map wildlife corridors. The findings highlight the ecological processes facilitated by these corridors, such as species movement, migration, and gene flow. Moreover, the positive impact of corridors on the conservation of other wildlife species besides tigers is discussed, providing evidence from case studies and research findings. The research paper underscores the importance of these corridors in enhancing connectivity, promoting biodiversity conservation, and safeguarding the habitat of tigers in the Mukundra Hills Tiger Reserve. The results of this study contribute valuable insights to inform conservation and management strategies for the effective preservation of this unique and ecologically significant reserve.

Keywords: *Wildlife Corridor, Tiger Reserve, Mukundra Hills, Wildlife, Corridor Mapping.*

Introduction

The preservation of biodiversity and the conservation of tiger habitats are crucial for maintaining the ecological balance and ensuring the long-term survival of these magnificent creatures. In this context, the establishment of wildlife corridors has emerged as a vital strategy to enhance connectivity and promote the conservation of biodiversity within protected areas. The Mukundra Hills Tiger Reserve, located in [location], is a significant landscape that provides a habitat for diverse flora and fauna, including the iconic tigers. Recognizing the importance of maintaining habitat connectivity and addressing the challenges posed by habitat fragmentation, this research paper focuses on exploring the role of wildlife corridors in enhancing connectivity for biodiversity conservation and tiger habitat preservation within the Mukundra Hills Tiger Reserve.

Wildlife corridors are strips of habitat which serve to connect otherwise isolated habitat patches that were once connected in historical time (*Saunders and Hobbs 1991*). Corridors should increase the rate of immigration and thus increase species number within a reserve by permitting species that have become extinct to recolonize the reserve. In addition, corridors should permit individuals to supplement resident re-serve populations (*Brown and Kodrick-Brown, 1977*) and thereby reduce the likelihood of

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local extinction of these populations. Furthermore, wildlife corridors can increase the effective size of the reserve and thus lower the probability of extinction of individual populations by providing additional feeding (Harris, 1985) and breeding habitat as well as cover.

The main objective of this study is to investigate the ecological processes facilitated by wildlife corridors and their contribution to the conservation of biodiversity, with a specific emphasis on tiger habitat preservation. The research employs a multidisciplinary approach, integrating various methodologies, including remote sensing and Geographic Information System (GIS) analysis, camera trapping, corridor modeling, scat and pellet collection, stakeholder engagement, and field observations. By adopting these methods, the study aims to identify and map wildlife corridors within the reserve, examine the movement patterns and genetic connectivity of wildlife species, and assess the impact of corridors on the conservation of not only tigers but also other wildlife species.

The findings of this research paper will provide valuable insights into the significance of wildlife corridors in the Mukundra Hills Tiger Reserve. It will shed light on the ecological processes facilitated by these corridors, such as species movement, migration, and gene flow, and their implications for maintaining healthy and resilient ecosystems. Additionally, the research will examine the positive impact of corridors on the conservation of various wildlife species besides tigers, underscoring the broader benefits of establishing connectivity within the reserve.

By bridging the gap between scientific research and on-ground conservation efforts, this study aims to inform effective conservation and management strategies for the preservation of biodiversity and the safeguarding of tiger habitats in the Mukundra Hills Tiger Reserve. The research outcomes will serve as a valuable resource for policymakers, conservationists, and local communities, providing guidance on the implementation of measures to enhance connectivity and ensure the long-term sustainability of this ecologically significant reserve.

Study Area

The study area for this research encompasses the Mukundra Hills Tiger Reserve and its surrounding regions, including nearby forest areas that have the potential for connecting with the reserve. The Mukundra Hills Tiger Reserve, located in 24.868°N 75.856°E, serves as the focal point of this study due to its ecological importance and significance for tiger conservation.

The Mukundra Hills Tiger Reserve is characterized by diverse landscapes, including hills, valleys, rivers, and varied vegetation types. It provides a critical habitat for numerous wildlife species, including the iconic Bengal tiger, as well as leopards, sambar deer, wild boars, and an abundance of avian species. The reserve acts as a key link in the broader landscape, connecting various forest patches and ecological corridors.

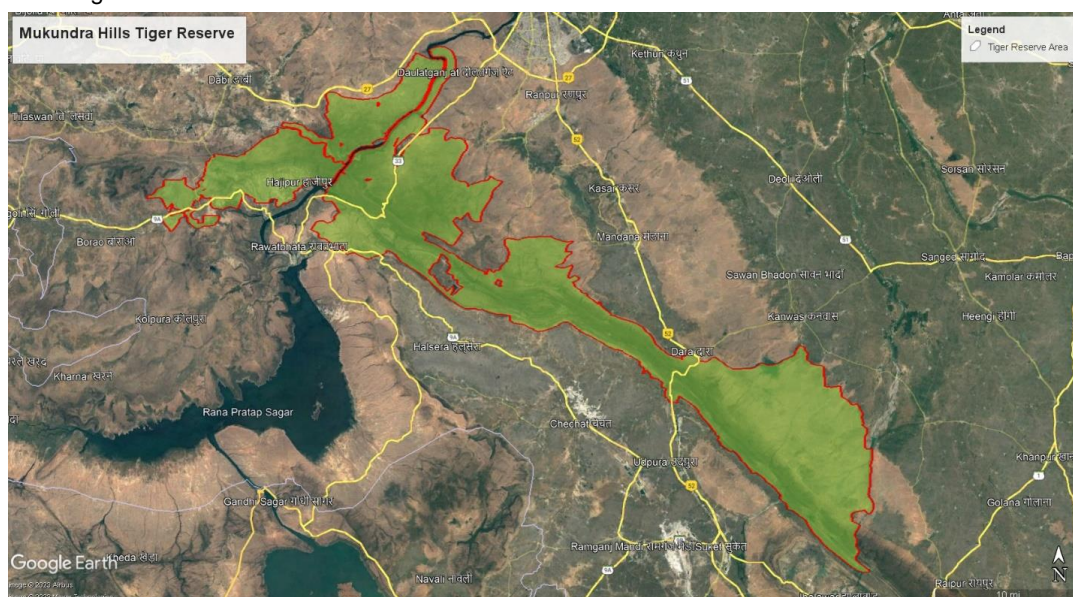


Fig. 1: Map of Mukundra Hills Tiger Reserve

In addition to the Mukundra Hills Tiger Reserve, the study extends to nearby forest areas that have the potential to serve as connecting corridors. These areas play a crucial role in maintaining habitat connectivity and facilitating the movement of wildlife between different habitats. By identifying and mapping these potential corridors, the research aims to enhance the understanding of landscape connectivity and its significance for biodiversity conservation.

The inclusion of the nearby forest areas in the study allows for a comprehensive assessment of connectivity within and around the Mukundra Hills Tiger Reserve. It enables the exploration of potential pathways for wildlife movement and the identification of key areas where conservation interventions, such as corridor establishment or habitat restoration, can be prioritized.

By focusing on both the Mukundra Hills Tiger Reserve and its surrounding forest areas, this research aims to provide valuable insights into the importance of landscape connectivity for biodiversity conservation. The findings will contribute to informed decision-making and the formulation of conservation strategies that ensure the long-term viability of wildlife populations in the study area and promote ecological connectivity on a larger scale.

Mukundra Hills Tiger Reserve, located in the state of Rajasthan, India, is a significant wildlife sanctuary known for its diverse ecosystem and the presence of the majestic Bengal tigers (*Panthera tigris tigris*). The reserve is situated in the southeastern part of Rajasthan, encompassing an area of approximately 759 square kilometers.

Formerly known as Darrah Wildlife Sanctuary, Mukundra Hills Tiger Reserve was officially declared as a tiger reserve in 2013, with the aim of conserving and protecting the tiger population and their habitat. The reserve is characterized by its hilly terrain, valleys, and dense forests, making it an ideal habitat for various wildlife species.

The flora in Mukundra Hills Tiger Reserve includes a mix of dry deciduous forests, thorny scrublands, and grasslands. The dominant tree species found in the reserve include Dhok (*Anogeissus pendula*), Tendu (*Diospyros melanoxylon*), Salai (*Boswellia serrata*), Khair (*Acacia catechu*), and Bamboo (*Bambusa vulgaris*).

In terms of fauna, besides the iconic Bengal tiger, Mukundra Hills Tiger Reserve is home to several other wildlife species. Some of the prominent mammal species found in the reserve include Leopard (*Panthera pardus*), Striped Hyena (*Hyaena hyaena*), Sloth Bear (*Melursus ursinus*), Sambar Deer (*Rusa unicolor*), Chital Deer (*Axis axis*), Nilgai (*Boselaphus tragocamelus*), and Indian wolf (*Canis lupus pallipes*). The reserve also supports a rich avian diversity with various resident and migratory bird species.

The establishment of Mukundra Hills Tiger Reserve aims to provide a secure habitat for the endangered Bengal tiger and other wildlife species, as well as promote ecological balance and biodiversity conservation. It serves as an important ecological corridor connecting the Ranthambore Tiger Reserve and the Kota-Bundi Forest landscape, facilitating the movement of wildlife populations and maintaining genetic connectivity.

Importance of Wildlife Corridors: Maintaining Genetic Diversity, Facilitating Species Migration, and Reducing Human-Wildlife Conflicts

Wildlife corridors serve as vital ecological pathways that play a crucial role in maintaining genetic diversity, facilitating species migration, and reducing conflicts between humans and wildlife. In the context of Mukundra Hills Tiger Reserve, these corridors are of paramount importance for preserving biodiversity and ensuring the long-term survival of various species, including the iconic Bengal tiger.

- **Maintaining Genetic Diversity:** Genetic diversity is crucial for the health and adaptability of wildlife populations. Wildlife corridors connect fragmented habitats, allowing individuals from different populations to interbreed and exchange genetic material. This gene flow enhances genetic diversity, which provides the foundation for species resilience and the ability to adapt to changing environmental conditions. By enabling the movement of individuals, wildlife corridors in Mukundra Hills Tiger Reserve contribute significantly to the preservation of genetic diversity and the long-term viability of wildlife populations.
- **Facilitating Species Migration:** Species migration is a natural phenomenon essential for various ecological processes, such as finding new resources, establishing territories, and avoiding inbreeding. Wildlife corridors act as migratory pathways, enabling the movement of species between different habitats and facilitating dispersal. In Mukundra Hills Tiger Reserve,

these corridors play a vital role in connecting core tiger habitats and allow for the dispersal and recolonization of tiger populations. Additionally, other wildlife species can use these corridors to migrate, leading to increased species richness and maintaining ecosystem balance.

- **Reducing Human-Wildlife Conflicts:** As human activities continue to encroach upon wildlife habitats, conflicts between humans and wildlife become more prevalent. Wildlife corridors help mitigate these conflicts by providing designated routes for wildlife movement. By channeling wildlife away from human settlements and agricultural areas, corridors reduce the likelihood of encounters and minimize crop damage or property destruction. In the context of Mukundra Hills Tiger Reserve, wildlife corridors can contribute to reducing human-tiger conflicts and promoting peaceful coexistence.

Role of Wildlife Corridors in Biodiversity Conservation

Wildlife corridors play a crucial role in biodiversity conservation by facilitating various ecological processes and maintaining connectivity between fragmented habitats. Here are some key aspects to consider:

- **Species Movement and Migration:** Wildlife corridors provide essential pathways for species movement and migration. They enable animals to access food, water, mates, and suitable habitats, supporting their survival and population viability. Corridors serve as safe passages, allowing animals to traverse human-dominated landscapes, reducing the risk of isolation and genetic bottlenecks.
- **Gene Flow and Genetic Diversity:** Corridors promote gene flow by connecting isolated populations. This movement of individuals between fragmented habitats facilitates the exchange of genetic material, increasing genetic diversity within populations and reducing the risks of inbreeding. Gene flow is critical for the long-term viability and adaptive potential of wildlife species, enabling them to adapt to changing environmental conditions.
- **Dispersal and Colonization:** Wildlife corridors facilitate dispersal, particularly for young individuals seeking new territories. They enable the colonization of new areas, promoting population expansion and reducing competition within fragmented habitats. Dispersal is essential for maintaining healthy populations and enabling species to respond to environmental changes or recolonize previously occupied habitats.
- **Species Interactions and Ecological Processes:** Corridors facilitate interactions between different species, supporting ecological processes such as predation, pollination, and seed dispersal. By allowing the movement of predators and prey, corridors help maintain natural predator-prey relationships, contributing to ecosystem balance. They also enable the movement of pollinators, benefiting plant reproduction and biodiversity. Additionally, corridors facilitate the dispersal of seeds, aiding in forest regeneration and enhancing plant diversity.
- **Contributions to Wildlife Conservation:** While the primary focus of corridors in the Mukundra Hills Tiger Reserve may be on tiger conservation, they also benefit a wide range of other wildlife species. Corridors support the conservation of various mammals, birds, reptiles, and amphibians by providing connectivity and enhancing habitat availability. This, in turn, helps conserve overall biodiversity within the reserve.

Identification of Wildlife Corridors: Factors and Methods for Effective Conservation

The process of identifying and mapping wildlife corridors within the Mukundra Hills Tiger Reserve is crucial for preserving ecological connectivity and facilitating the movement of species. This section explores the factors considered and the methods employed to identify and map wildlife corridors in the reserve.

Factors Considered in Identifying Wildlife Corridors

Several factors are taken into account when identifying wildlife corridors in Mukundra Hills Tiger Reserve. These factors include:

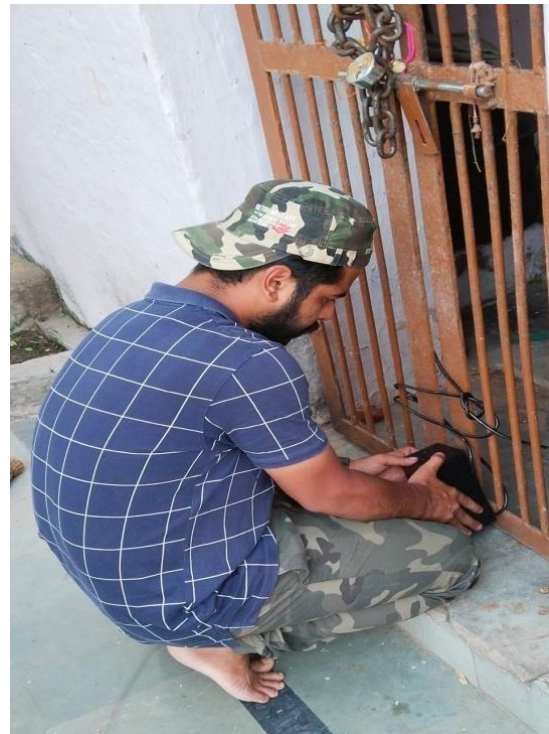
- **Habitat Suitability:** Assessment of suitable habitat conditions within the reserve is crucial for determining potential wildlife corridors. Factors such as food availability, water sources, vegetation cover, and shelter are considered to ensure that corridors provide suitable conditions for species movement.

- **Vegetation Cover:** Vegetation plays a vital role in wildlife movement, providing cover, food, and nesting sites. The mapping of vegetation types and their connectivity is considered when identifying corridors, as they should provide continuous cover for species to traverse.
- **Landscape Connectivity:** The connectivity of different landscapes and habitat patches is essential for maintaining wildlife movement. Analysis of landscape features, such as topography, rivers, and land cover, helps identify corridors that connect core habitats and allow for unimpeded species movement.

Methods for Identifying and Mapping Wildlife Corridors

In this study, various methods were employed to identify and map wildlife corridors within the Mukundra Hills Tiger Reserve. The following approaches were utilized, reflecting the fieldwork conducted to gather data and insights:

- **Remote Sensing and GIS:** The analysis of remote sensing data, including satellite imagery, was conducted to examine land cover patterns, vegetation types, and landscape features. Geographic Information System (GIS) tools were utilized to integrate and analyze the spatial data, aiding in the identification and mapping of potential wildlife corridors. By overlaying habitat suitability models and landscape data, corridors were delineated and prioritized for conservation efforts.
- **Camera Trapping and Wildlife Surveys:** Camera traps were strategically placed at selected locations throughout the Mukundra Hills Tiger Reserve. These camera traps were triggered by motion or heat, capturing images and videos of wildlife as they moved through the area. By setting up camera traps and conducting wildlife surveys, direct observations of wildlife movement patterns, habitat usage, and species presence were recorded. Additional information, such as animal sightings, tracks, and signs of movement, was gathered during field surveys, complementing the camera trapping data.

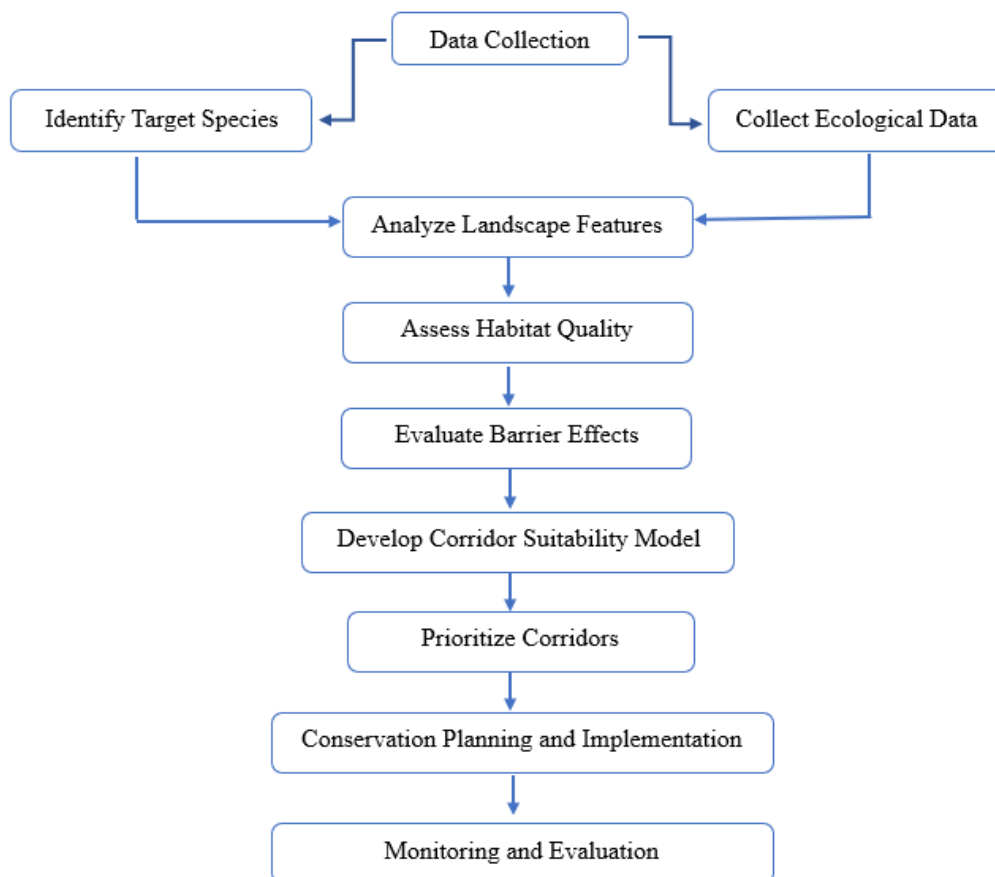


Camera Trapping at Chamawali Mata Temple



Sloth Bear movement in Chamawali Mata Temple

- Corridor Modeling:** Corridor modeling involved the integration of ecological data, landscape features, and species movement patterns to develop predictive models of corridor suitability. Field data on habitat preferences and movement patterns of target species within the Mukundra Hills Tiger Reserve were collected. By analyzing landscape connectivity, habitat quality, and potential barriers, spatially explicit models were developed to predict and prioritize potential wildlife corridors. These models guided conservation planning and management decisions, aiding in the identification of areas with high corridor suitability.



- **Data Collection:** Gather relevant data on the study area, including remote sensing data, topographic maps, land cover information, and existing wildlife movement data.
 - **Identify Target Species:** Determine the focal species for the corridor modeling. Consider their ecological requirements, movement patterns, and habitat preferences.
 - **Collect Ecological Data:** Conduct field surveys to gather information on habitat characteristics, vegetation types, prey availability, and other ecological parameters relevant to the target species.
 - **Analyze Landscape Features:** Use GIS tools to analyze landscape features such as vegetation cover, water bodies, elevation, and land use/land cover. These features help identify potential corridors and connectivity pathways.
 - **Assess Habitat Quality:** Evaluate the quality of different habitat patches within the study area, considering factors such as food availability, water sources, shelter, and breeding sites.
 - **Evaluate Barrier Effects:** Identify potential barriers that impede wildlife movement, such as highways, human settlements, agricultural fields, or natural features like rivers or steep slopes.
 - **Develop Corridor Suitability Model:** Combine the ecological data, landscape features, movement patterns, habitat quality, and barrier information to develop a spatially explicit corridor suitability model. This model predicts areas with high suitability for wildlife movement and corridor establishment.
 - **Prioritize Corridors:** Based on the corridor suitability model, prioritize potential corridors by considering factors like connectivity, ecological significance, conservation value, and feasibility of implementation.
 - **Conservation Planning and Implementation:** Develop conservation strategies and management plans for the identified corridors. Collaborate with relevant stakeholders and implement measures to protect and enhance the connectivity provided by the corridors.
 - **Monitoring and Evaluation:** Continuously monitor the effectiveness of the established corridors, assess their impact on wildlife movement, and evaluate the success of conservation measures. Make adjustments as needed to ensure long-term corridor functionality and ecological benefits.
- **Scat and Pellet Collection:** Systematic collection and analysis of scat (feces) and pellets left behind by wildlife species were conducted. During field surveys, samples were collected along transects or predetermined paths within potential corridor areas. Visual examination and laboratory analysis techniques were used to identify the species and gather information on their presence, movement patterns, and habitat use. Scat and pellet collection provided tangible evidence of wildlife utilization of specific areas or corridors, confirming the presence of target species and aiding in corridor identification.

Pictures of Scats, Pellets, Pug marks & Scratch Marks



Pellet of chinkara



Scat of Leopard



Pellet of Porcupine



Scat of Sloth Bear



Scat of Leopard



Scat of Golden Jackal

- Stakeholder Engagement and Local Knowledge:** Collaboration and engagement with local communities, forest departments, and other stakeholders were key components of this study. Local knowledge, including traditional ecological practices and community observations, were integrated into the research process. By involving stakeholders, valuable insights into wildlife movement patterns, migratory routes, and historical corridors were obtained. The collaboration ensured that scientific findings were validated, local perspectives were considered, and conservation efforts aligned with community practices and priorities.
- Pugmark, Scratch Marks, and Footprints:** Field observations of pugmarks (animal paw prints), scratch marks, and footprints were conducted to identify wildlife corridors. These signs of animal presence and activity were regularly collected and documented during field surveys. Pugmarks allowed for species identification and approximate sizes, while scratch marks indicated animal activity and territorial marking. Footprints provided insights into movement patterns and were used to determine the presence of various species. These observations aided in the identification and mapping of wildlife corridors.



Pugmark of Stripped Hyena



Pugmark of Wolf



Pugmark of Leopard



Scratch made by Sloth Bear

- Direct Sighting:** Direct sightings of fauna were recorded during field surveys. Researchers visually observed and identified animals in their natural habitats within the Mukundra Hills Tiger Reserve. These direct sightings were documented through written records and the use of a camera to capture photographs. The photographs served as tangible evidence of species presence and behavior, contributing to the identification and documentation of wildlife corridors.



Sloth Bear



Striped Hyena

Research Findings

Several case studies and research findings demonstrate the positive impact of wildlife corridors on biodiversity conservation within the Mukundra Hills Tiger Reserve and other similar reserves. Here are a few examples:

- Movement of Ungulates:** Research conducted within the Mukundra Hills Tiger Reserve has shown that wildlife corridors enable the movement of ungulates such as deer and antelope species. These corridors allow these herbivores to access different foraging areas and water sources, supporting their population dynamics and providing prey base for tigers.
- Bird Migration:** Studies on bird migration patterns have revealed that wildlife corridors facilitate the movement of migratory bird species between breeding and wintering grounds. By providing safe routes, corridors ensure that migratory birds can complete their seasonal journeys, promoting population persistence and contributing to avian biodiversity conservation.
- Genetic Connectivity of Reptiles:** Research focusing on reptiles, including snakes and lizards, has shown that corridors enhance genetic connectivity between populations. Corridors allow reptiles to disperse and access different habitat patches, reducing the negative effects of habitat fragmentation and promoting genetic diversity within reptile populations.
- Plant Diversity and Forest Regeneration:** Corridors have been found to play a crucial role in promoting plant diversity and forest regeneration. They facilitate the dispersal of seeds, enabling the colonization of new areas by plant species and supporting forest ecosystem resilience. Research has shown higher plant diversity and improved forest structure in areas connected by corridors compared to isolated patches.

Faunal Diversity of Study Area**Mammals**

- Bengal Tiger (*Panthera tigris tigris*)
- Indian Leopard (*Panthera pardus fusca*)
- Sloth Bear (*Melursus ursinus*)
- Indian Wild Dog (*Cuon alpinus*)
- Indian Wolf (*Canis lupus pallipes*)
- Striped Hyena (*Hyaena hyaena*)
- Indian Fox (*Vulpes bengalensis*)
- Golden Jackal (*Canis aureus*)
- Sambar Deer (*Rusa unicolor*)
- Spotted Deer (*Axis axis*)
- Nilgai (*Boselaphus tragocamelus*)
- Wild Boar (*Sus scrofa*)
- Indian Crested Porcupine (*Hystrix indica*)
- Indian Pangolin (*Manis crassicaudata*)
- Indian Gazelle (*Gazella gazella*)
- Indian Hare (*Lepus nigricollis*)
- Indian Flying Squirrel (*Petaurista philippensis*)
- Rhesus Macaque (*Macaca mulatta*)
- Indian Gray Langur (*Semnopithecus spp.*)

Birds

- Indian Peafowl (*Pavo cristatus*)
- Painted Stork (*Mycteria leucocephala*)
- Indian Roller (*Coracias benghalensis*)
- White-throated Kingfisher (*Halcyon smyrnensis*)
- Indian Eagle Owl (*Bubo bengalensis*)
- Malabar Pied Hornbill (*Anthracoceros coronatus*)
- Indian Pitta (*Pitta brachyura*)
- Indian Paradise Flycatcher (*Terpsiphone paradisi*)
- Red-headed Vulture (*Sarcogyps calvus*)
- Indian Skimmer (*Rynchops albicollis*)
- Indian Robin (*Saxicoloides fulicatus*)
- Indian Bushlark (*Mirafra erythroptera*)
- Great Indian Bustard (*Ardeotis nigriceps*)
- Black-rumped Flameback (*Dinopium benghalense*)
- Indian Grey Hornbill (*Ocyrceros birostris*)

Reptiles

- Indian Rock Python (*Python molurus*)
- Indian Cobra (*Naja naja*)
- Russell's Viper (*Daboia russelii*)
- Indian Monitor Lizard (*Varanus bengalensis*)
- Indian Chameleon (*Chamaeleo zeylanicus*)
- Indian Star Tortoise (*Geochelone elegans*)

Amphibians:

- Indian Bullfrog (*Hoplobatrachus tigerinus*)
- Indian Golden-backed Frog (*Hylarana aurantiaca*)
- Indian Skittering Frog (*Euphlyctis cyanophlyctis*)
- Marbled Balloon Frog (*Uperodon systoma*)

Wildlife Corridors of Mukundra Hills Tiger Reserve

The preservation and enhancement of wildlife habitats are crucial for maintaining biodiversity and promoting the long-term survival of species. In the context of the Mukundra Hills Tiger Reserve, the establishment of wildlife corridors plays a vital role in connecting fragmented habitats and facilitating the movement of wildlife across the landscape. These corridors, such as the Mukundra - Ramgarh Vishdhari, Mukundra - Bassi Wildlife Sanctuary, Mukundra - Kuno Madhya Pradesh, and Mukundra - Chambal Wildlife Sanctuary corridors, provide essential pathways for species dispersal, genetic exchange, and access to resources. Understanding and conserving these wildlife corridors are fundamental for ensuring the ecological integrity and resilience of the Mukundra Hills Tiger Reserve and its surrounding ecosystems.

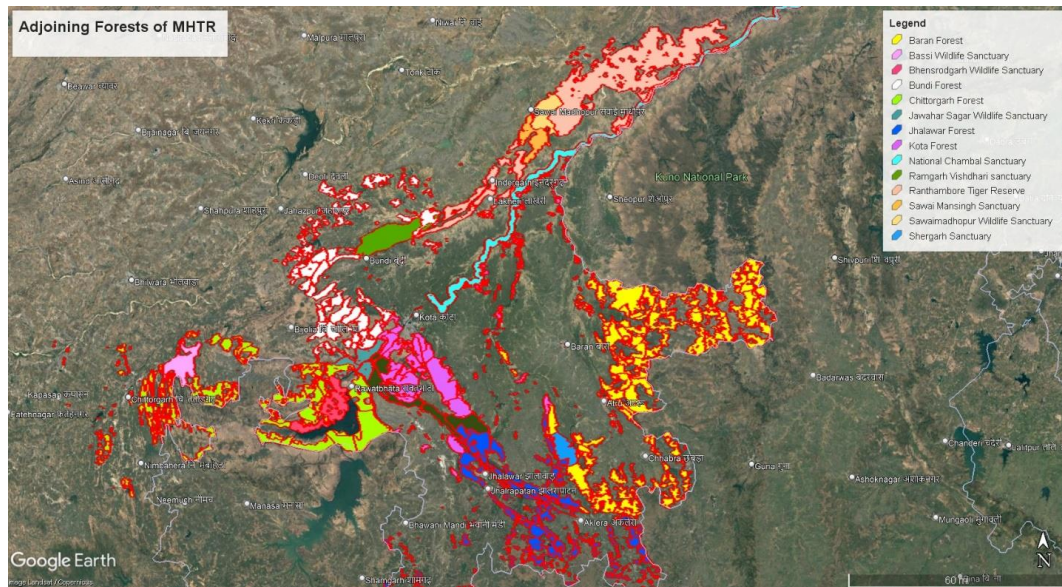


Fig.: Adjoining Forests of MHTR

Mukundra – Ramgarh Vishdhari Wildlife Corridor

The Mukundra Hills Tiger Reserve is located in the Kota district of Rajasthan and is known for its diverse flora and fauna. The reserve was established to provide a protected habitat for tigers and other wildlife species. On the other hand, the Ramgarh Vishdhari Wildlife Sanctuary is situated in the Bundi district of Rajasthan and is also home to various species of plants and animals. The Mukundra-Ramgarh Vishdhari Corridor serves as a vital passage for wildlife, enabling them to move freely between the Mukundra Hills Tiger Reserve and the Ramgarh Vishdhari Wildlife Sanctuary. This connectivity plays a crucial role in maintaining genetic diversity, allowing for the exchange of individuals between the two protected areas. By establishing this corridor, conservationists aim to mitigate the negative impacts of habitat fragmentation and promote the long-term survival of wildlife populations. It helps in facilitating the movement of tigers, allowing them to access a larger range of resources, establish new territories, and reduce the risk of inbreeding.

The Mukundra-Ramgarh Vishdhari Corridor exemplifies the significance of wildlife corridors in enhancing connectivity and promoting biodiversity conservation. It serves as a critical link between two protected areas, enabling the movement of wildlife and contributing to the overall ecological health of the region.

Faunal Diversity in Mukundra – Ramgarh Vishdhari Wildlife Corridor

S. No	Name of the Animal	Camera Photos	Pug Mark/ Foot Print	Scat	Pellet	Scratching Marks	Other Indirect Evidences
1.	LEOPARD	û	û	û	-	û	Personal interview
2.	SLOTH BEAR	û	û	û	-	û	Personal interview
3.	STRIPPED HYENA	û	û	û	-	û	Personal interview
4.	GOLDEN JACKAL	û	û	û	-	û	Personal interview

5.	WOLF	ü	ü	û	-	û	Personal interview
6.	JUNGLE CAT	ü	ü	û	-	û	Personal interview
7.	WILD BOAR	ü	û	-	ü	-	Personal Interview
8.	BLUE BULL	ü	ü	-	ü	-	Personal Interview
9.	CHINKARA	ü	ü	-	ü	-	-
10.	HANUMAN LANGUR	ü	û	-	ü	-	-
11.	HARE	ü	û	-	ü	-	-
12.	CHITAL	ü	û	-	û	-	-
13.	MONITOR LIZARD	ü	û	ü	-	-	-
14.	GREY MONGOOSE	ü	û	û	-	-	-
15.	PORCUPINE	û	ü	ü	-	-	-

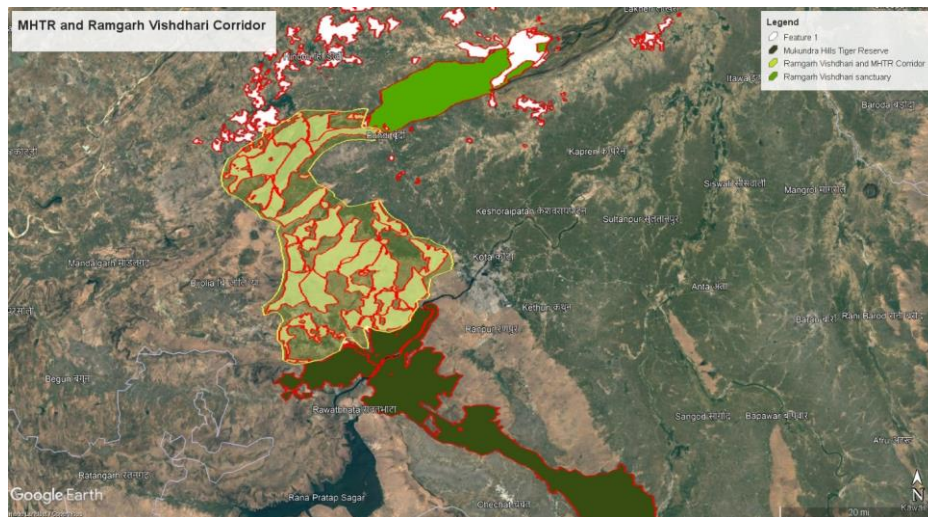


Fig: Mukundra – Ramgarh Vishdhari Wildlife Corridor

Mukundra – Bassi Wildlife Sanctuary Corridor

The Mukundra Hills Tiger Reserve is renowned for its biodiversity, including a population of tigers, while the Bassi Wildlife Sanctuary is known for its diverse flora and fauna. The corridor serves as a crucial link between these two protected areas, facilitating the movement of wildlife and enabling genetic exchange between populations. The Mukundra-Bassi Wildlife Sanctuary Corridor plays a vital role in maintaining healthy wildlife populations. It allows animals, including tigers, to disperse, access new habitats, and establish territories. By providing connectivity, the corridor mitigates the negative impacts of habitat fragmentation and supports the long-term survival of species.

Conservation efforts focus on preserving the integrity of the corridor. These may include habitat restoration, management of human-wildlife conflicts, and collaboration with local communities to promote wildlife conservation awareness. The establishment of the Mukundra-Bassi Wildlife Sanctuary Corridor underscores the significance of maintaining ecological connectivity for the preservation of biodiversity. It emphasizes the need for conservation planning that considers the connectivity needs of wildlife and ensures their continued movement across fragmented landscapes.

Faunal Diversity in Mukundra – Bassi Wildlife Sanctuary Corridor

S. No.	Name of the Animal	Camera Photos	Pug Mark	Scat	Pellet	Scratching Marks	Other Indirect Evidences
1.	LEOPARD	û	û	ü	-	û	Personal interview
2.	SLOTH BEAR	û	û	ü	-	ü	Personal interview
3.	STRIPPED HYENA	û	ü	ü	-	û	Personal interview
4.	GOLDEN JACKAL	ü	ü	ü	-	û	Personal interview
5.	TIGER	û	û	û	-	û	Personal interview
6.	JUNGLE CAT	ü	ü	ü	-	û	Personal interview
7.	WILD BOAR	ü	û	-	ü	-	Personal Interview
8.	BLUE BULL	ü	ü	-	ü	-	Personal Interview
9.	CHINKARA	ü	û	-	ü	-	-

10.	HANUMAN LANGUR	ü	û	-	ü	-	-
11.	HARE	ü	û	-	ü	-	-
12.	CHITAL	ü	û	-	ü	-	-
13.	MONITOR LIZARD	ü	û	-	-	-	-
14.	GREY MONGOOSE	ü	û	ü	-	-	-
15.	PORCUPINE	û	ü	ü	-	-	-

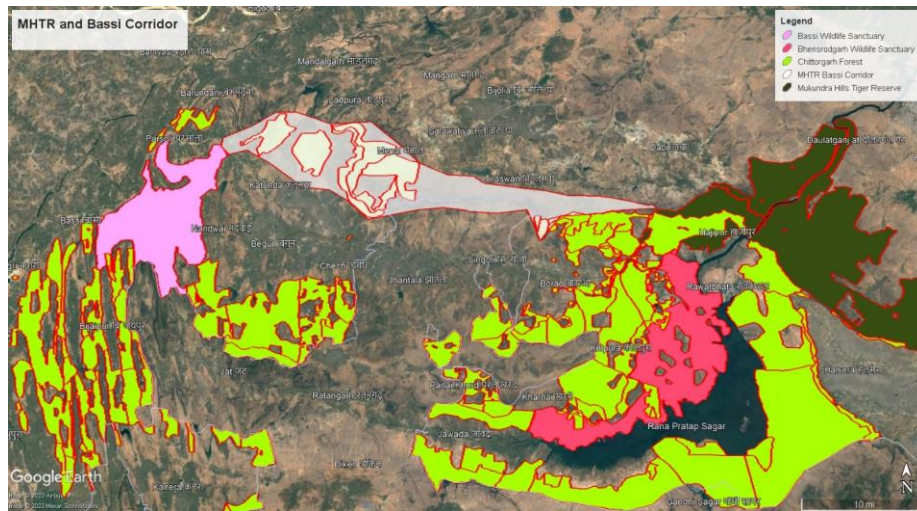


Fig: Mukundra – Bassi Wildlife Sanctuary Corridor

Mukundra – Kuno Madhya Pradesh Corridor

The Mukundra-Kuno Madhya Pradesh Corridor is a significant wildlife corridor that aims to establish connectivity between the Mukundra Hills Tiger Reserve in Rajasthan and the Kuno-Palpur Wildlife Sanctuary in Madhya Pradesh, India. The Kuno-Palpur Wildlife Sanctuary, situated in the Sheopur district of Madhya Pradesh, is another important wildlife habitat. The corridor plays a crucial role in facilitating the movement of wildlife between these two protected areas, allowing for genetic exchange and maintaining healthy populations. It helps in mitigating the negative effects of habitat fragmentation and enables animals, including tigers, to access a larger range of resources. The establishment of the Mukundra-Kuno Madhya Pradesh Corridor is part of a broader initiative to create a larger landscape connectivity network for wildlife across state boundaries. By connecting the Mukundra Hills Tiger Reserve with the Kuno-Palpur Wildlife Sanctuary, it enhances the overall ecological connectivity and conservation efforts in the region. Conservation strategies for the corridor may involve habitat restoration, wildlife monitoring, and the implementation of measures to minimize human-wildlife conflicts. Collaboration with local communities, awareness programs, and stakeholder involvement are also crucial for the successful management and protection of the corridor. The establishment of the Mukundra-Kuno Madhya Pradesh Corridor demonstrates the importance of cross-boundary connectivity in preserving biodiversity and promoting wildlife conservation on a larger scale.

Faunal Diversity in Mukundra – Kuno Madhya Pradesh Corridor

S. No.	Name of the Animal	Camera Photos	Pug Mark/ Foot Print	Scat	Pellet	Scratching Marks	Other Indirect Evidences
1.	LEOPARD	û	ü	ü	-	û	Personal interview
2.	SLOTH BEAR	û	û	ü	-	û	Personal interview
3.	STRIPPED HYENA	û	ü	ü	-	û	Personal interview
4.	GOLDEN JACKAL	ü	û	ü	-	û	Personal interview
5.	TIGER	û	û	û	-	û	Information on provided by the victim
6.	JUNGLE CAT	ü	û	û	-	û	Personal interview
7.	WILD BOAR	ü	û	-	ü	-	Personal Interview
8.	BLUE BULL	ü	ü	-	ü	-	Personal Interview
9.	CHINKARA	ü	û	-	ü	-	-

10.	HANUMAN LANGUR	ü	û	-	ü	-	-
11.	HARE	ü	û	-	ü	-	-
12.	CHITAL	ü	ü	-	û	-	-
13.	MONITOR LIZARD	ü	û	ü	-	-	-
14.	GREY MONGOOSE	ü	û	ü	-	-	-
15.	PORCUPINE	û	ü	ü	-	-	-

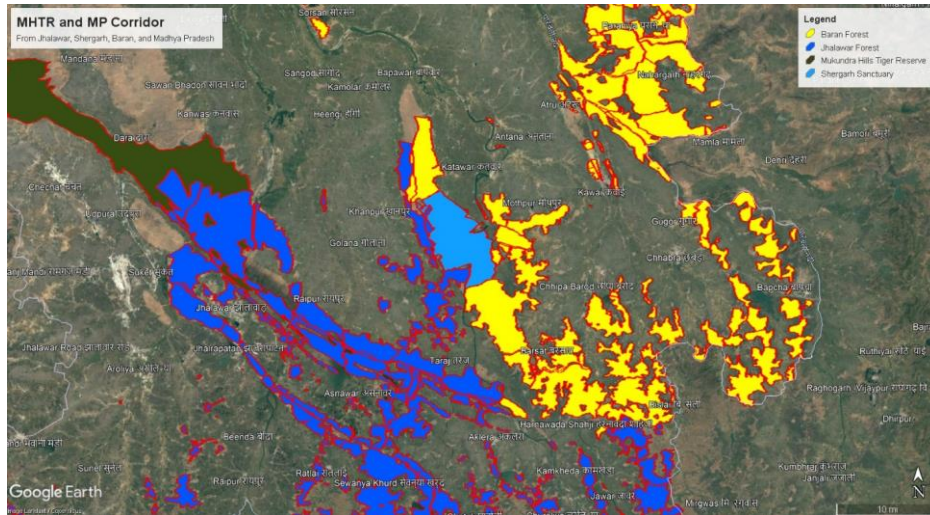


Fig: Mukundra – Kuno Madhya Pradesh Corridor

Mukundra – Chambal Wildlife Sanctuary Corridor

The Mukundra-Chambal Wildlife Sanctuary Corridor is a vital wildlife corridor that connects the Mukundra Hills Tiger Reserve (MHTR) to the Chambal Wildlife Sanctuary in Rajasthan, India. This corridor facilitates the movement of wildlife between these two protected areas. The corridor plays a crucial role in enabling wildlife, including tigers, to disperse, establish territories, and access different habitats. It promotes genetic exchange, maintains population viability, and contributes to the long-term survival of species.

The Mukundra-Chambal Wildlife Sanctuary Corridor has been observed as a pathway for tiger migration, allowing tigers to move from Ranthambore National Park to the Mukundra Hills Tiger Reserve. These migrations are important for maintaining genetic diversity and expanding tiger populations. Conservation efforts are focused on preserving the integrity of the Mukundra-Chambal Wildlife Sanctuary Corridor. This involves implementing measures such as habitat restoration, anti-poaching initiatives, and community engagement to ensure the effective management and protection of the corridor. The presence of the Mukundra-Chambal Wildlife Sanctuary Corridor emphasizes the significance of maintaining ecological connectivity to support wildlife conservation, particularly for tigers, and to safeguard the overall biodiversity of the region.

Faunal Diversity in Mukundra – Chambal Wildlife Sanctuary Corridor

S. No.	Name of the Animal	Camera Photos	Pugmark/ Foot Print	Scat	Pellet	Scratching Marks	Other Indirect Evidences
1.	LEOPARD	û	ü	ü	-	û	Personal interview
2.	SLOTH BEAR	û	û	ü	-	û	Personal interview
3.	STRIPPED HYENA	û	û	ü	-	û	Personal interview
4.	GOLDEN JACKAL	ü	û	û	-	û	Personal interview
5.	TIGER	ü	û	û	-	û	Personal interview
6.	JUNGLE CAT	ü	û	û	-	û	Personal interview
7.	WILD BOAR	ü	û	-	û	-	Personal Interview
8.	BLUE BULL	ü	ü	-	ü	-	Personal Interview
9.	CHINKARA	ü	û	-	ü	-	-
10.	HANUMAN LANGUR	ü	û	-	ü	-	-

11.	HARE	ü	û	-	ü	-	-
12.	CHITAL	ü	û	-	û	-	-
13.	MONITOR LIZARD	ü	û	ü	-	-	-
14.	GREY MONGOOSE	ü	û	û	-	-	-
15.	PORCUPINE	û	û	ü	-	-	-

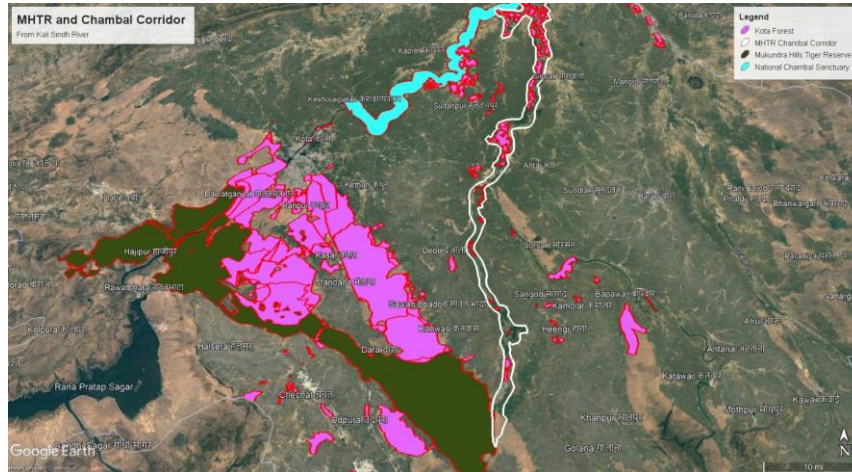


Fig: Mukundra – Chambal Wildlife Sanctuary Corridor

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