

PROJECT
CHEETAH
IN INDIA



THE CHEETAH

Acinonyx jubatus

FASTEST LAND ANIMAL, EMBODYING GRACE AND POWER

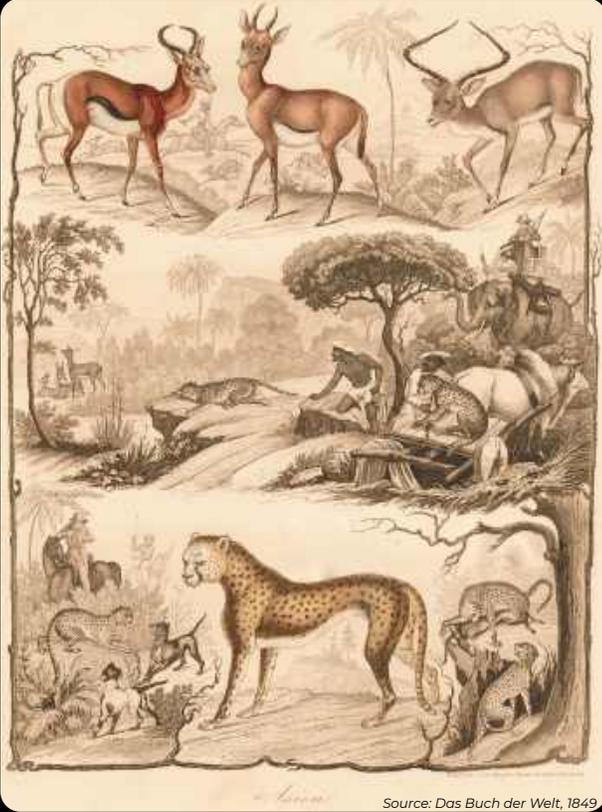


Geographical Range

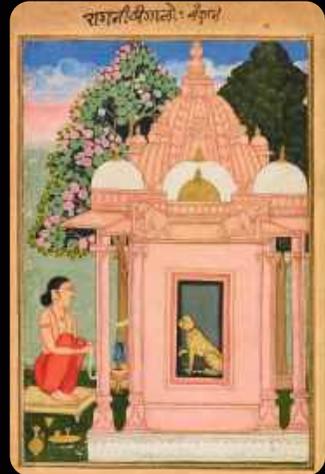
The Altered Landscape of Cheetah Distribution

Historical Perspective

The once-widespread cheetahs, gracing Africa and parts of Asia, have witnessed a staggering decline in their expansive range over time. Originally, these magnificent creatures roamed freely across diverse landscapes, leaving an indelible mark on the continents.



Source: Das Buch der Welt, 1849



Source: www.imagella.com

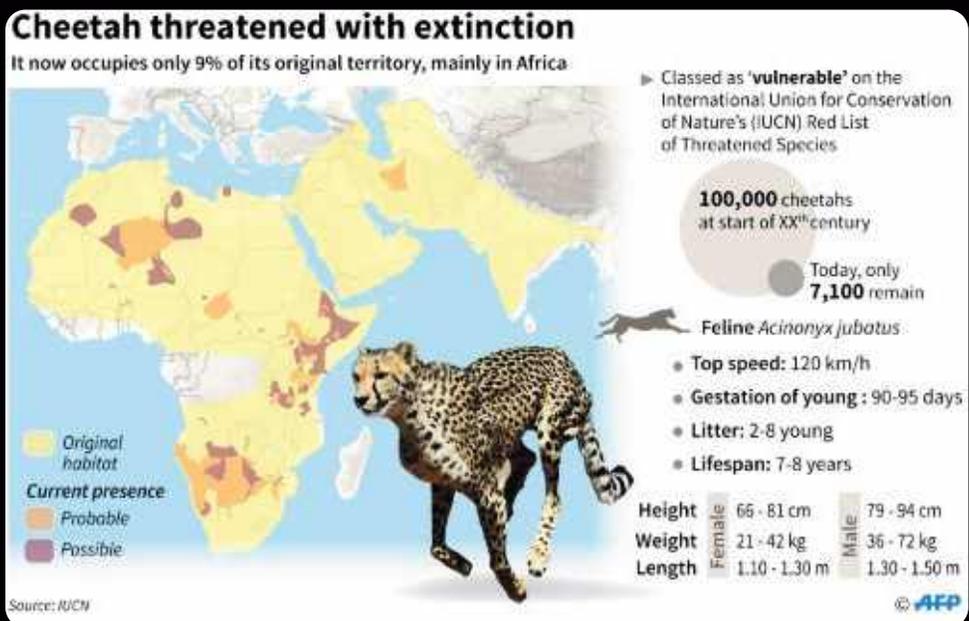


African Strongholds

In the African domain, Southern and Eastern Africa serve as the last bastions for cheetahs. However, a stark reality unfolds as they persist in a mere 10% of their historic African range. Eastern Africa, home to only 6% of the historical cheetah territory, faces a daunting challenge. Southern Africa, though more resilient, grapples with a 22% retention of the historic cheetah domain.

Struggling Transboundary Populations

Southern Africa hosts a critical transboundary population, uniting Namibia, Botswana, Angola, South Africa, Mozambique, and Zambia. Yet, the cheetah's presence remains fragile, confronting threats across this vast expanse.



Waning Glory in Western, Central, and Northern Africa

In these regions, cheetahs face an alarming decline, especially the *A. j. hecki* subspecies in northwestern Africa, currently designated as Critically Endangered. Surviving in a mere 10% of their historical range, cheetahs in this region endure challenging conditions, particularly within the Sahara.

Asia's Vanishing Act

The cheetah's tale in Asia is one of sorrow, with extinction echoing across its historic range. Once spanning from the Mediterranean shores to the heart of India, the Asiatic Cheetah (*A. j. venaticus*) now teeters on the brink of extinction, confined solely to Iran, where it is categorized as Critically Endangered.

Unraveling Threats to Survival

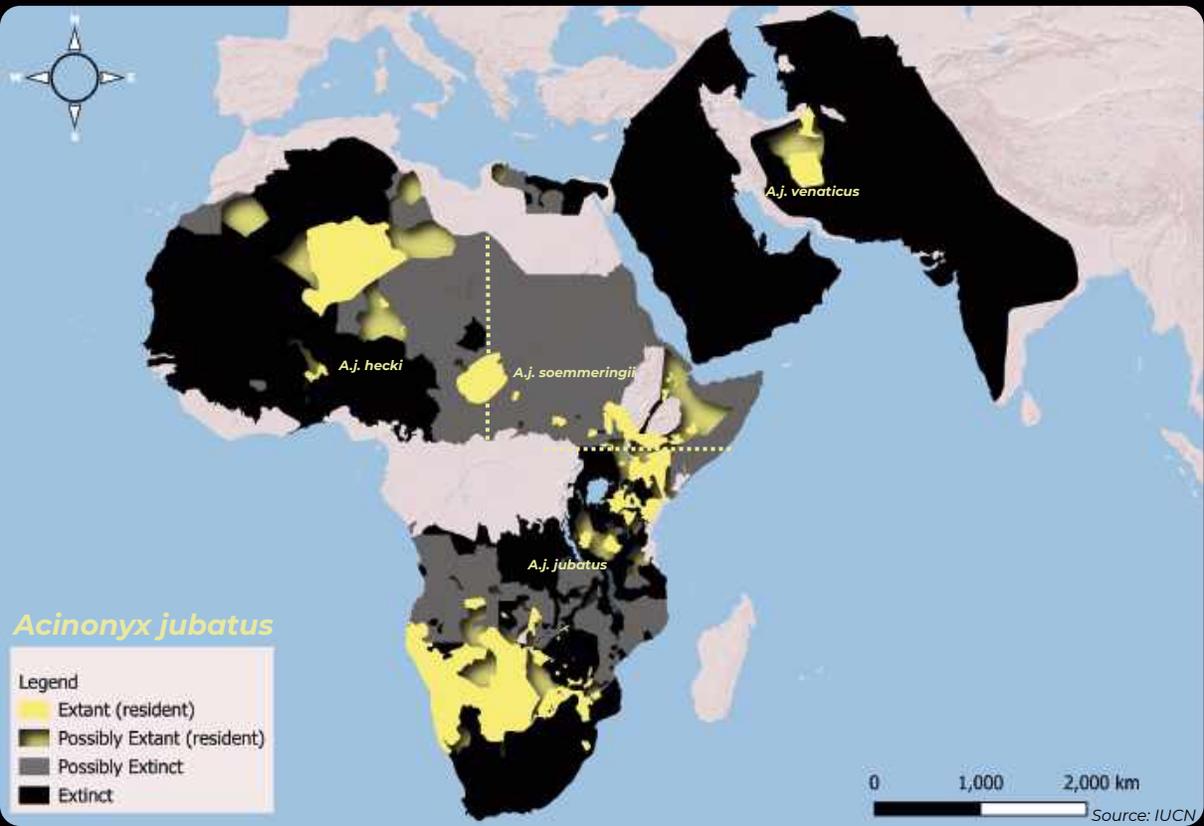
The main threats to cheetahs include conflict with humans and livestock, loss of prey, habitat change, and illegal trade. These threats have led to a dramatic decline in cheetah populations, and conservation efforts are needed to protect and preserve this endangered species.



Historical Range

Cheetahs were historically widespread across Africa and southwestern Asia.

They thrived in diverse ecosystems, including grasslands, savannas, and semi-arid regions, displaying their adaptability to various environments.



Current Distribution

Cheetahs are currently found in only 9% of their historical distributional range, occurring in a variety of habitats such as savannahs in the Serengeti, arid mountain ranges in the Sahara and hilly desert terrain in Iran.

The global cheetah population is tentatively estimated at around 7,100 adult and adolescent individuals.

CHEETAH POPULATION EXTINCT IN > 20 COUNTRIES



Threats/Conservation Concern

The reduction in their distribution raises significant conservation concerns, as cheetahs face challenges such as habitat loss, human-wildlife conflict, and illegal trade.

Encroachment of human activities into cheetah habitats has resulted in increased instances of human-wildlife conflict, further affecting their distribution.



Tracing the Extinction Trajectory: Cheetah's Vanishing Act in India and Asia

Historical Significance

The cheetah, an emblem of charisma, holds profound importance in India's conservation narrative. Its name, "Cheetah", finds roots in Sanskrit, meaning "the spotted one". The echoes of this majestic creature resonate in ancient Indian literature like the Rigveda and the Atharvaveda, with Neolithic cave paintings in central India dating back to 10-20 kBP capturing its essence. However, the irony lies in its absence from the Indian landscape.

Decline and Extinction in India

In 1952, the cheetah bid farewell to India, succumbing to a culmination of threats. Large-scale captures for coursing, bounties, and sports hunting, coupled with habitat fragmentation and destruction, dwindled their range and prey base. The 20th century witnessed a severe decline, exacerbated by inadequate conservation measures in Indian reserves, amplifying the plight of these majestic felines.

Asiatic Cheetah's Asian Exodus



Source: Divyabhanusinh 2013, End of a Trail

Across Asia, the cheetah faced extirpation from its historic range, extending from the Mediterranean and the Arabian Peninsula to the Caspian and Aral Seas, onward to Uzbekistan,

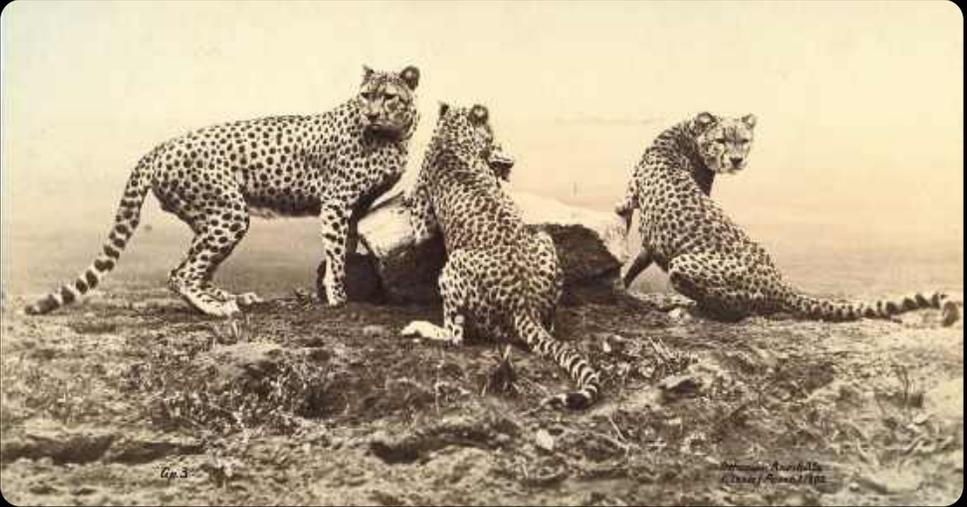
Turkmenistan, Afghanistan, and Pakistan into central India. Live capture for aristocratic sports, depletion of wild prey, direct killing, and habitat fragmentation contributed to their disappearance. The critically endangered Asiatic Cheetah (*A. j. venaticus*) now clings to survival only in Iran, with slim prospects in Pakistan. Afghanistan, once a habitat, is considered devoid, although intriguing traces surfaced in 2007.

This scientific exploration illuminates the intricate web of factors leading to the cheetah's historical demise in India and its dwindling presence across its Asian domain.

Causes of Extinction of Cheetahs in India

The big cat population got completely wiped out in the early 1950s, mainly due to over-hunting and habitat loss.

Records of cheetahs being hunted (sport hunting, capturing during Mughal period) go back to the 1550s.



16th Century

In the Mughal period, the cheetahs were used extensively for hunting (coursing).

Emperor Akbar had 1,000 cheetahs in his menagerie.



17th Century

The first cheetah in the world was bred in captivity in India during the reign of Jahangir

Wild cheetah held captive for hunting antelopes

In 1947

Maharaja Ramanuj Pratap Singh Deo, ruler of the erstwhile Koriya state, today known as Chhattisgarh, **killed the last three cheetahs living in the country.**

In 1952

The indigenous population is officially extinct, due to poaching and habitat loss, though a few sporadic sightings continued to be reported from central and Deccan regions till the mid-1970s.



INCEPTION OF HOPE

THE GENESIS OF PROJECT CHEETAH



© Xavier Ortega

The first wildlife board meeting of independent India called for assigning special priority for protection of the cheetah in central India

1950s: Acknowledgement of Extinction.

Discussions on cheetah reintroduction in India initiated soon after their confirmed extinction in the mid-1950s.

1970s: Initial proposals to Iran

Proposal presented to the Iranian government in the 1970s

Political instability in the region prevented the realization of these plans

1980s: Kenya expressed interest in offering African cheetahs for reintroduction.

2009: The Indian government officially proposed the introduction of cheetahs from Africa in 2009.



Cheetah Reintroduction in India: Unraveling a Complex Narrative

Historical Context

The saga of cheetah reintroduction in India weaves a complex tale that traces its roots to the 1950s, when the species faced extinction. Formal endeavours commenced in the 1970s, involving negotiations with Iran and later discussions with Kenya. In 2009, India proposed the introduction of cheetahs from Africa, a proposition initially met with clarifications required by the Hon. Supreme Court of India. However, in 2020, a pivotal decision allowed the import of a limited number of cheetahs for an experimental reintroduction program, seeking to assess their adaptability to the Indian environment.

Symbolic Significance

The cheetah's historical significance in India, resonating in ancient literature and art, contrasts starkly with its absence, emblematic of human-induced wildlife decline. The ongoing efforts to reintroduce the cheetah reflect a commitment to resurrect this charismatic species, while the survival of the Asiatic cheetah in Iran hangs in the balance.

Controversies and Challenges

The reintroduction project faces intense scrutiny, skepticism on scientific, conservation, and ethical grounds. Translocation of cheetahs from Africa than the native Asiatic cheetah raised concerns of adaptability. Challenges, including the initial demise of reintroduced individuals and doubts about the adequacy of the chosen site, contribute to ongoing debates.

Debates and Future Outlook

In conclusion, the cheetah's return to India is entwined with a rich historical backdrop, sparking debates about its scientific merit, conservation value, and ethical standards. The project's trajectory, marked by complexities and controversies, stirs intense discussions about its implications for India's biodiversity and conservation endeavours. The ultimate success and impact of this initiative remain subjects of profound scrutiny and debate.

Legal Hurdles and Reversal

Initial proposals faced hurdles, but in early 2020, the Hon. Supreme Court of India made a decision to permit a limited import of cheetahs for an experimental reintroduction program.

Historical Acknowledgment and Negotiations

In 1952, the Indian government acknowledged the cheetah's plight and called for special protection. Negotiations with Iran in the 1970s for Asiatic cheetahs were inconclusive. The Wildlife (Protection) Act of 1972 and subsequent conservation initiatives paved the way for renewed discussions in 2009.



Launch of Project Cheetah

Project Cheetah, overseen by the National Tiger Conservation Authority (NTCA), was officially launched in India following the Hon. Supreme Court directives in 2020. The Wildlife Institute of India (WII) provides technical assistance, coordinating the reintroduction project. By upholding India's conservation ethos, Project Cheetah aims to revive the lost splendour of the cheetah, contributing to the country's rich biodiversity and ecological balance.



project cheetah

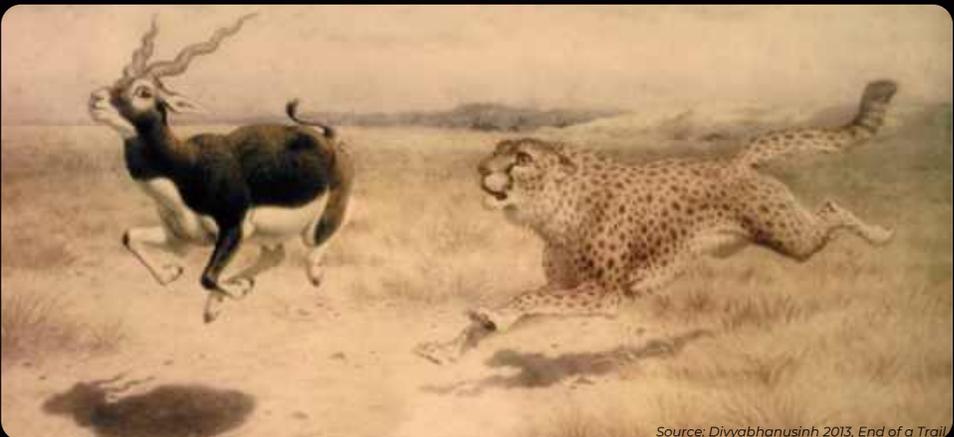
Cheetah's Return—Conservation Catalyst for Biodiversity Renewal:

Predation Dynamics

Reviving the cheetah in India holds significant conservation implications, shaping the adaptation of high-speed capabilities in Indian antelopes and gazelles. Conservation efforts will safeguard the prey base, including threatened species, and protect other endangered species in grasslands and open forest ecosystems.

Ecotourism Potential

Cheetahs, with their high ecotourism value, can attract visitors globally. Their conservation can contribute to sustainable ecotourism initiatives, generating economic opportunities for local communities and raising awareness for overall ecosystem conservation.



Source: Divyabhanusinh 2013, End of a Trail

Restoration as a Model

Cheetah restoration serves as a prototype for the restoration of original cheetah habitats and biodiversity. Lessons learnt will benefit the management of these ecosystems, addressing the degradation and loss of biodiversity.



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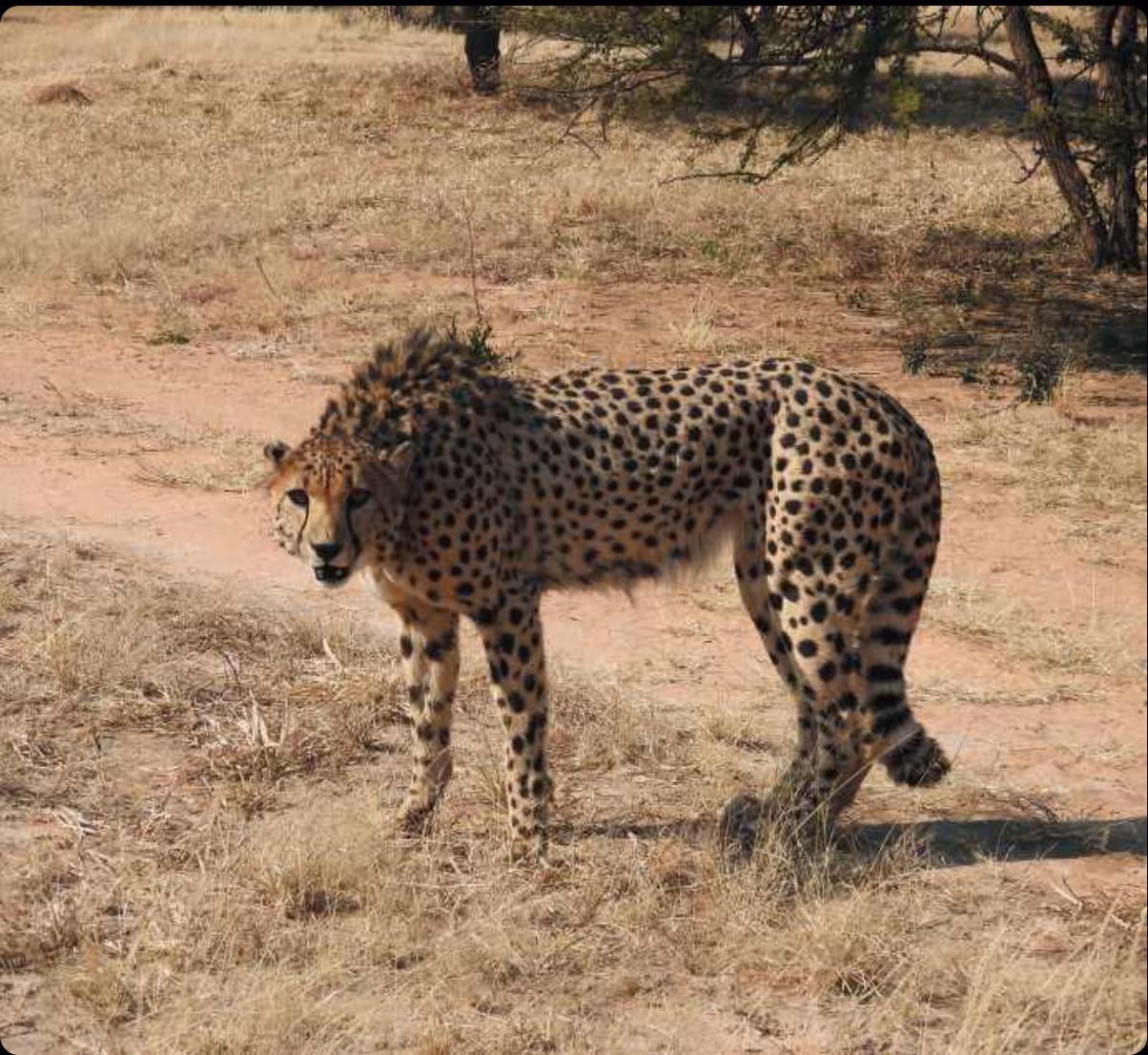
Cheetah's Return- Conservation Catalyst for Biodiversity Renewal:

The main goal of the Cheetah introduction project in India is to “Establish viable cheetah metapopulation in India that allows the cheetah to perform its functional role as a top predator and provides space for the expansion of the cheetah within its historical range, thereby contributing to its global conservation efforts”.



The Objectives of Project Cheetah

- 1.To establish breeding cheetah populations in safe habitats across their historical range and manage them as a meta-population.
- 2.To use the cheetah as a charismatic flagship and umbrella species to garner resources for restoring open forest and savanna systems that will benefit biodiversity and ecosystem services from these ecosystems.
- 3.To enhance India's capacity to sequester carbon through ecosystem restoration activities in cheetah conservation areas and thereby contribute towards the global climate change mitigation goals.
- 4.To use the ensuing opportunity for ecodevelopment and ecotourism to enhance local community livelihoods.
- 5.To manage any conflict by cheetah or other wildlife with local communities within cheetah conservation areas, expediently through compensation, awareness, and management actions to win community support.



Process of Cheetah Introduction in India

Action Plan for Introduction of Cheetah in India

In a significant leap towards biodiversity restoration, the Wildlife Institute of India, under the guidance of the National Tiger Conservation Authority, meticulously constructed a comprehensive scientific action plan in 2022. This groundbreaking initiative aligns seamlessly with the IUCN guidelines for carnivore translocations, ensuring a strategic and ecologically sound approach to the reintroduction of cheetahs in India.

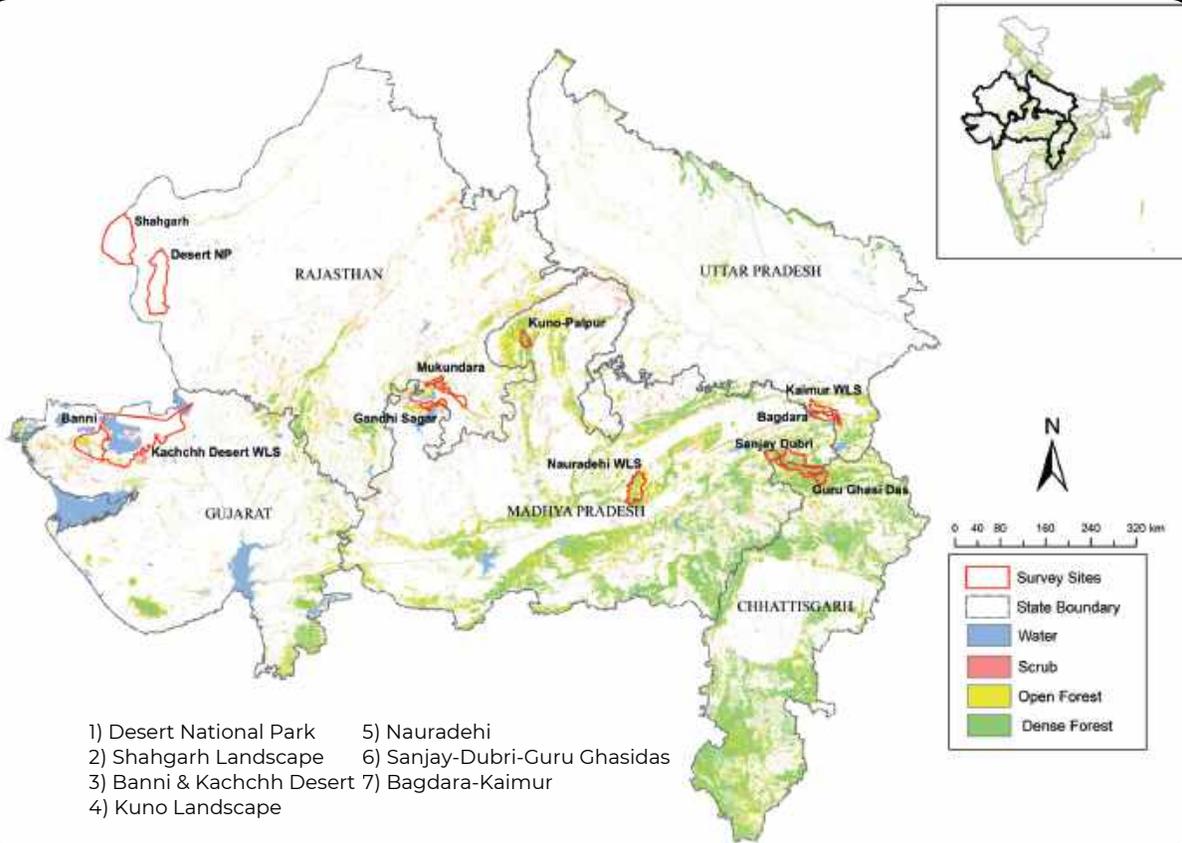
The action plan serves as a blueprint, encompassing a range of scientific methodologies, conservation strategies, as well as ecological considerations and human dimensions. By adhering to international standards and leveraging the expertise of renowned conservation authorities, this scientific roadmap aims to facilitate a successful and sustainable reintroduction of cheetahs, marking a pivotal moment in India's commitment to wildlife conservation.

Reviving Ecosystems: Selecting Optimal Sites for Cheetah Reintroduction

The initiative to reintroduce cheetahs in India is not merely a species recovery project but a scientific prototype for the restoration of their original habitats. This endeavour holds the key to rejuvenating grassland/open natural ecosystems and addressing the declining status of regional biodiversity.

The reintroduction of cheetahs serves as a catalyst for restoring the delicate balance of the historic ecological landscape. By reinstating this top predator, the project aims to safeguard predator-prey dynamics, thereby contributing to the conservation of other endangered species in the grasslands and open forest ecosystems.

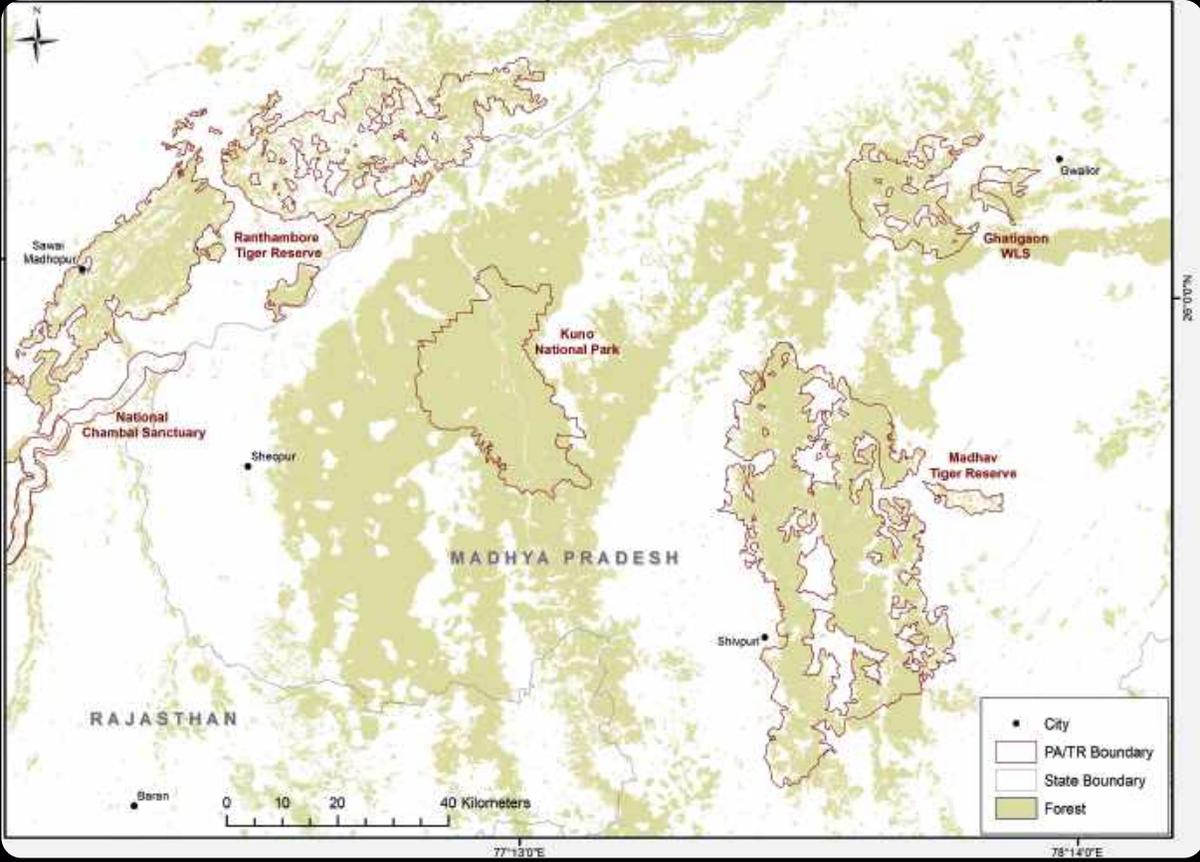
In the pursuit of identifying suitable sites for this crucial reintroduction, the Committee surveyed ten locations in the central Indian states. Among these, Kuno Palpur National Park (KNP) in Madhya Pradesh emerged as the most promising candidate. Spanning an expansive 748 km², KNP offers not only a suitable habitat but also boasts an adequate prey base. Crucially, the site is free from anthropogenic disturbances and is integral to the Sheopur-Shivpuri deciduous open forest landscape of a mostly contiguous area of 6800km².



Recommended Site: Kuno Palpur National Park

Kuno Palpur National Park, situated in the heart of Madhya Pradesh, earned the highest rating among the surveyed sites, making it the recommended location for cheetah reintroduction. With its vast area, conducive habitat, and ample prey resources, KNP stands as a beacon for the successful restoration of cheetahs in India. The park's ecological integrity, coupled with its absence of human disturbances, positions it as a prime candidate to spearhead the conservation initiative, marking a significant step towards revitalising India's natural heritage.





The location of Kuno National Park is shown within the contiguous landscape of the Sheopur-Shivpuri forest of 6800 square kilometres.

Savanna habitat in Kuno National Park



The park falls under the northern tropical dry deciduous forest as per the revised classification of forest types of India (Champion & Seth 1968). The dominant trees in this landscape are Kardhai (*Terminalia pendula*) and Salai (*Boswellia serrata*), while the middle storey is dominated by Khair (*Senegalia catechu*), Reonja (*Vachellia leucopholea*), and Tendu (*Diospyros melanoxylon*).

Kardhai (Terminalia pendula) forest in Kuno National Park during monsoon



Salai (Boswellia seratta) forest in Kuno National Park during monsoon



The park is also home to a variety of wild ungulates and herbivorous mammals, including chital, sambar, nilgai, wild pig, chinkara, chousingha, blackbuck, northern plains grey langur, rhesus macaque, Indian porcupine, and black-naped hare. Additionally, the park houses a diverse range of mammalian carnivores such as leopard, sloth bear, striped hyena, grey wolf, golden jackal, Indian fox, ratel, jungle cat, Asiatic wild cat, rusty spotted cat, Indian grey mongoose, ruddy mongoose, Asian palm civet, and small Indian civet. Notably, Kuno National Park is one of the only wildlife sites in the country where there has been a complete intectivized voluntary relocation of villages from inside the park, with the village sites and their agricultural fields now being managed as a savannah habitat.

Prey density of Kuno National Park

Kuno National Park (748 km²) is part of a larger landscape (6800 km²) with ample habitat suitable for cheetahs (3200 km²). The latest prey assessment before cheetah reintroduction was conducted by the Wildlife Institute of India (WII) in 2021, using line transect and random camera-trap-based distance sampling to determine the prey population.

The results of the assessment revealed that the park's most abundant wild prey is chital, with a population density of 38.48 individuals per km² and 51.58 animals per km² for all potential cheetah prey species. The carrying capacity for cheetahs at Kuno was computed using the population densities of potential cheetah prey obtained from distance sampling. Based on this, the park has the potential to sustain up to 21 cheetahs, and with restorative measures and scientific management, the potential cheetah habitat covering over 3200 km² in Kuno landscape could provide a prey base for up to 36 cheetahs, making it one of the most suitable landscapes for cheetahs in terms of prey availability. The park's reduced human pressures, following the incentivized voluntary relocation of villages from within the park, have contributed to its potential to support a significant cheetah population.

Herbivores of Kuno National Park



Identifying Source Population

Before reintroducing cheetahs to India, meticulous planning was undertaken to choose an ideal source population. The focal point of this unprecedented carnivore translocation project was the genetic makeup of the founder population. Given the unavailability of surviving Asiatic cheetahs from Iran, consultation with renowned conservation geneticists worldwide was crucial. After an extensive evaluation of published studies, experts agreed that all cheetah subspecies share a close genetic proximity to *A. j. venaticus*, making the Iranian stock less influential. The Southern African subspecies (*A. j. jubatus*) from Namibia and South Africa was deemed the most suitable founder, backed by their sizable and sustainable populations.

A Memorandum of Understanding between India and Namibia was signed to promote Wildlife Conservation on July 20, 2022



Charting Habitat Suitability: Eco-Climatic modeling

The presence locations of cheetahs from Southern Africa formed the basis for an Eco-Climatic Niche Model, aiming to map equivalent niche space in India. Focused on Southern Africa as the potential source, the model considered eco-climatic covariates crucial for determining habitat suitability. Integration of cheetah presence locations with comprehensive data on land use, precipitation, temperature, elevation, and human impacts laid the foundation. The MaxEnt model exhibited robust predictive ability, revealing grassland, scrub, and open forest systems, semi-arid environments, low human impacts, and higher temperatures as critical factors defining cheetah habitat suitability.

Niche Prediction in India: Aligning with Historical Strongholds

The analysis showcased an alignment between the predicted climatic niche of cheetahs from southern Africa and historical strongholds in India. Kuno National Park in Madhya Pradesh emerged prominently as an area with a high probability of cheetah habitat suitability. This holistic approach, blending genetic considerations and eco-climatic modeling, sets the stage for a strategic and informed cheetah reintroduction, aiming to re-establish these majestic predators in their historical landscapes.

Historic Milestone: The Arrival of Cheetahs to Kuno National Park – Intercontinental Wildlife Translocation

Project Cheetah, driven by the goal to reinstate the cheetah population in India following its local extinction in the 1950s, executed a strategic plan involving the identification and transportation of healthy cheetahs from viable donor populations in Africa. In a historic milestone on September 17, 2022, the first batch of eight cheetahs (comprising five females and three males) was transported from Namibia to Kuno National Park in India. The release of these cheetahs into quarantine bomas within Kuno NP was overseen by the Hon'ble Prime Minister of India.

**1st Batch-
8 Cheetahs,
17th September 2022,
From Namibia**

- **Male – 3**
- **Female - 5**

**2nd Batch-
12 Cheetahs,
18th February 2023,
From South Africa**

- **Male – 7**
- **Female - 5**



To fortify the founder population, ongoing discussions and procedures facilitated the procurement of an additional twelve cheetahs from various private game reserves in South Africa. This augmentation initiative culminated on February 18, 2023, with the transportation of these twelve cheetahs to India. Subsequently, they were released into quarantine bomas within Kuno NP.



While the introduction of African cheetahs in India has not been without criticism, notably concerning potential inbreeding and hybridization concerns with Asiatic cheetahs in Iran, Project Cheetah stands as a commendable scientific endeavour. The project has drawn attention for its dual potential: addressing concerns about preserving India's extensive grasslands and contributing to the restoration of national pride. The ongoing efforts signify a meticulous blend of conservation science, strategic planning, and national commitment, marking a noteworthy chapter in India's wildlife conservation endeavours.



Glorious Return: Cheetahs' Arrival and Release in Kuno National Park, India



The eight Namibian Cheetahs underwent a meticulous process of acclimatisation upon their arrival, being housed in predator-proof Quarantine Bomas (QBs) with dimensions ranging from 25 m × 25 m to 55 m × 30 m. Ensuring provisions for water, shade, and cover, the cheetahs spent two and a half months in QBs before transitioning to soft release in large Closed Natural Area (CNA) in November 2022. Simultaneously, the 12 South African Cheetahs were relocated to the Closed Natural Area in April 2023.



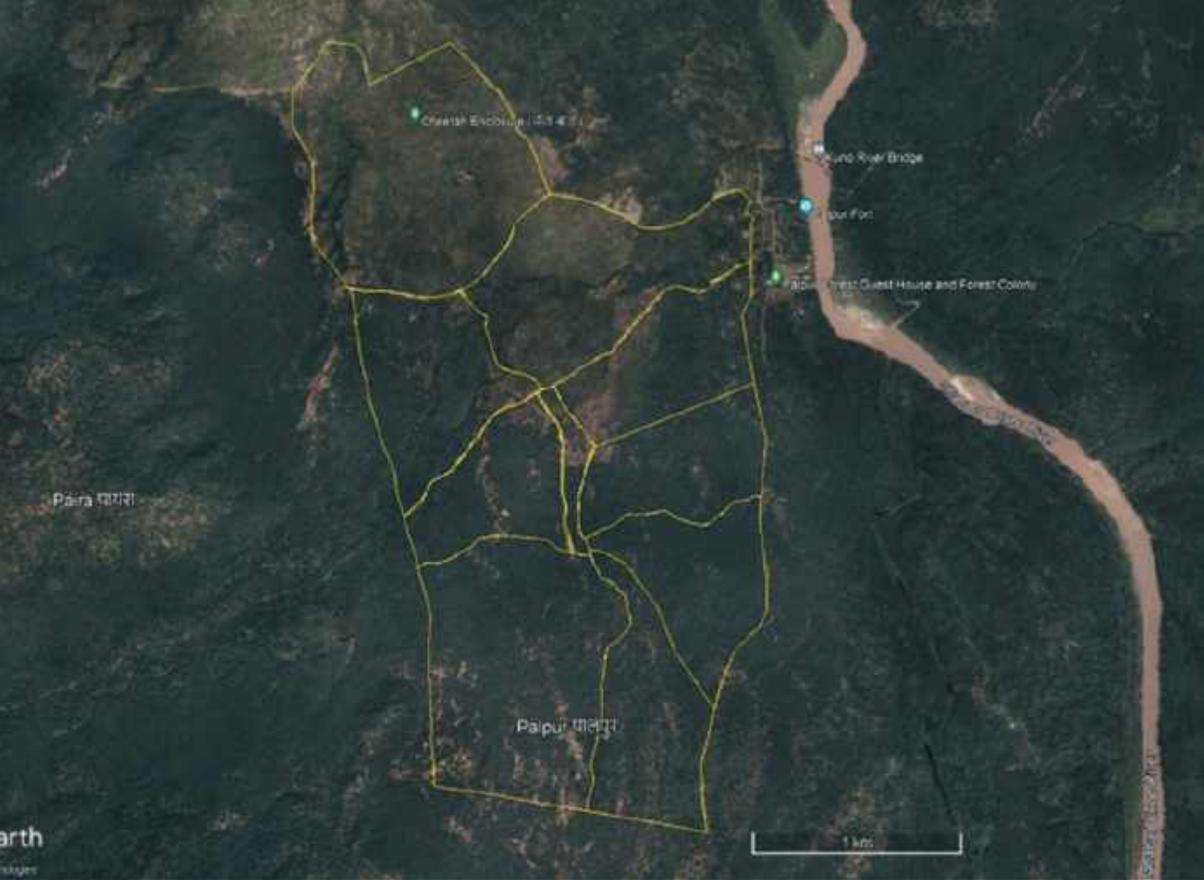
Adhering to stringent protocols, a monitoring team, comprising a veterinarian, Forest Department field staff, and WII research personnel, conducted bi-daily observations of the cheetahs' health and behavior during the quarantine period. To prevent live hunting opportunities, a feeding schedule was implemented within the QBs, minimizing human interference to reduce disease transmission risks. Continuous 24-hour distant monitoring from strategically placed observation points, including machans/watch towers and high mast cameras, ensured data collection on cheetahs' daily routines.



Design of cheetah quarantine boma

The quarantine period concluded successfully with no issues such as injuries, diseases, or fatalities, and all cheetahs thrived exceptionally well. After receiving clearance from the Department of Animal Husbandry and Dairy (DAHD), New Delhi, and completing the mandatory quarantine period, the cheetahs transitioned to the CNA. These large forested areas, harbouring wild prey, enclosed with predator-proof fencing, ranging from 50 hectares to 153 hectares, allowed acclimatisation to natural surroundings and provided hunting opportunities.

Within the large compartments of CNA, each cheetah was fitted with a satellite and GPS radio collar for tracking and monitoring. Regular visual monitoring, aided by two separate teams of field staff, WII researchers, and veterinarians, ensured the cheetahs adapted comfortably to their wild surroundings. Controlled interactions were permitted between selected cheetah males and females within the CNA, leading to observed mating instances. Notably, one female from Namibia, Jwala/Siyaya, successfully gave birth to four cubs inside the SRB in March 2023. The project benefited from the expertise of Namibian cheetah experts stationed at Kuno, contributing to monitoring, training, and knowledge sharing throughout the reintroduction process.



Map of large Closed Natural Area for soft release





Vigilant Health Oversight: Cheetah Monitoring in Quarantine Period

Upon arrival in India, the cheetahs underwent a stringent quarantine period, housed in a secure double-fenced enclosure designed to prevent contact with resident wildlife. Lasting over 30 days, this mandatory quarantine involved daily visual assessments, documenting behaviour, physical condition, and appetite during feeding days.

Adhering to directives from the Department of Animal Husbandry and Dairy (DAHD) and guidance from the Regional Quarantine Officer, the cheetahs underwent necessary laboratory tests as per the Animal Quarantine and Certification Services (AQCS) standards. A team of trained veterinarians at Kuno performed biological sampling, with collected samples sent to the College of Veterinary Sciences in Jabalpur and the National Institute of High Security Animal Diseases (NIHSAD) in Bhopal for disease prevalence studies.

In line with the Order of Ministry (OM) L-110102(I)/135/2022-Trade (E22395) dated 8.09.2022, a committee, overseen by the National Tiger Conservation Authority (NTCA), conducted inspections of the Quarantine Facility for Imported Live Cheetahs at Kuno NP on two occasions: 10.09.2022 and 01.02.2023 (prior to the arrival of each set of cheetahs). The committee's recommendations were diligently implemented within the quarantine area, ensuring compliance with biosecurity measures and health surveillance for the imported cheetahs.

Precise Protocols in Cheetah Quarantine: Ensuring Health and Hygiene

- **Dedicated Vehicles:** Two vehicles were exclusively assigned for routine health assessment, feeding, and sanitation. A 12-inch tyre dip at the entrance ensured disinfection.
- **Equipment Management:** All equipment used in quarantine was designated for exclusive use within the premises, stored in a makeshift tent.
- **Handling Team:** A dedicated team from the Forest Department was assigned for cheetah quarantine-related tasks.
- **Health Screening:** Routine health screening camps for staff were organized periodically, involving the Chief Medical Officer and NGOs like Wildlife Conservation Trust.
- **Meat Procurement:** Cheetahs were fed meat from authorized slaughterhouses, slaughtered in the presence of a veterinarian, with ante-mortem and post-mortem examinations.
- **Necropsy and Incineration:** Designated areas within the quarantine premises were identified for necropsy and incineration if required.
- **Waste Disposal:** A burn pit next to the QBs facilitated daily disposal of animal and feed waste, with vector control through regular weeding.
- **Adherence to SOPs:** Strict adherence to relevant SOPs and guidelines issued by the Government of India and competent authorities.



- **Nutritious Diet:** Cheetahs received a nutritious diet mimicking natural feed starvation cycles.
- **Visual Health Checks:** Daily visual checks in the morning and evening were conducted by caretakers and veterinarians.
- **Round-the-Clock Monitoring:** Concealed observation from watchtowers ensured 24/7 monitoring for water intake, urination, and defecation.
- **Cleaning Activities:** Routine cleaning activities were conducted when cheetahs were feeding, maintaining a safe distance.
- **Training:** Namibian experts imparted training on cheetah care and behavior to the Indian team at Kuno.
- **Minimal Human Interaction:** Strict measures were in place to minimize human interaction, considering stress sensitivity in cheetahs.
- **Quarantine Clearance:** After 27 days, the veterinary team submitted health reports and laboratory results to obtain a Quarantine Clearance Certificate, allowing the release of cheetahs into larger enclosures.



Feeding of Cheetahs during Quarantine

Feeding cheetahs in a controlled environment involves careful planning and safety measures to ensure the health and well-being of the animals. The feeding process is carried out in a designated feeding chamber, where the food is prepared, portioned, and weighed. The approach to the animals is gentle and soothing to promote a calm and stress-free environment. The food is placed inside the feeding chamber, and carers step back to minimize distractions, allowing the cheetahs to approach the food at their own pace. Close observation is maintained to ensure healthy eating behavior and monitor overall health. Simultaneously, a separate team tends to the open enclosure area, performing cleaning and maintenance tasks to maintain a hygienic environment. Once the essential tasks are completed, the gate connecting the feeding chamber to the open enclosure is reopened, granting the cheetahs unrestricted access to the enclosure again.



Soft release of cheetahs in Kuno NP

- After completing the mandatory quarantine in QBs and obtaining clearance from the Department of Animal Husbandry and Dairy (DAHD) in New Delhi, cheetahs were transferred to a special fenced area called Closed Natural Areas (CNAs) before being released into Kuno National Park. These CNAs, totalling 6 sq km and divided into nine compartments (ranging from 0.5 to 1.0 sq km), are enclosed by predator-proof solar-powered electric fencing.
- The electric fencing spans 12 km, standing at a height of 2.5 m with nine electric wires generating pulsating current at 7-9 kV. The transition to the CNA is a crucial step before the cheetahs' final release into the free-ranging environment of Kuno NP. These large forested areas, averaging 80-90 hectares each, facilitate the cheetahs' acclimatisation to their natural habitat, providing opportunities for hunting wild prey.
- Nine compartments in CNAs of varying sizes, from 50 to 153 hectares, offer diverse prey species like chital, nilgai, sambar deer, wild pig, and hare. Each CNA is equipped with water facilities, including saucers and guzzlers, with refilling arrangements from overhead tanks outside the enclosure.



Monitoring (health) of the cheetah after release into the large Closed Natural Area (soft release)

- Daily check-ups: Twice daily, dedicated tracking teams, comprising a veterinarian, a researcher, and two field staff, diligently observe various aspects of the cheetahs in the enclosure. This includes monitoring fitness, activity levels, overall health, body condition, behavior, hunting patterns, and habitat utilization. The teams also assess visible injuries, belly scores, and any other abnormal signs or symptoms, ensuring a comprehensive evaluation of the cheetahs' well-being.
- Detailed data collection: To document the geographic location, habitat types, and general behavior of the animals, a dedicated "Radio Location Data Sheet" was maintained. Instances of predation events are meticulously recorded in a specialized "Predation Data Sheet", providing valuable insights into the cheetahs' hunting behavior and success.
- Secure fence: Regular checks of the CNA fence were conducted to identify any electrical faults or breaches, ensuring the security and integrity of the enclosure. This thorough monitoring and documentation process contributed to the comprehensive management and care of the cheetahs during their transition period.



Monitoring of Cheetahs

The monitoring of cheetahs involves a multi-faceted approach employing cutting-edge technologies:

- **High Mast Cameras:** 24/7 surveillance provides detailed visual data on cheetah behavior, interactions, and potential threats.
- **Camera Trap Monitoring:** Strategic camera traps capture specific activities, especially hunting and prey interactions, at key locations.
- **Satellite/GPS/VHF Collars:** These collars allow real-time location tracking, movement pattern analysis, and identification of key habitat areas.



Before release, cheetahs were fitted with high-tech radio collars to track movements, monitor health, and understand their wild adaptation.

Marking a historic moment on March 11, 2023, India's Kuno National Park witnessed the release of the first two cheetahs, a male and female, back into the wild after decades of absence. This milestone marked the beginning of their journey to reclaim their place in the Indian ecosystem.

A Tapestry of Vigilance: Monitoring Cheetahs in the Wild

Following their release into the Indian wilderness, each cheetah was entrusted to a dedicated team of 4-5 guardians: a driver, forest watcher, forest guard, and WII researcher. These teams worked tirelessly in 24-hour shifts, constantly monitoring the cheetahs' movements by vehicle or on foot. With three teams per cheetah, a total of 144-180 individuals formed a watchful tapestry, ensuring the safety and well-being of these magnificent creatures.

- **24/7 Visual Observation:** Tracking teams continuously observe the cheetahs, assessing their health, fitness, and body condition through visual cues.

- **Regular Veterinary Checkups:** Veterinary teams visit the animals at least once every two days for thorough health checks and to address any immediate concerns.
- **Detailed Activity Monitoring:** The cheetahs' activity and behavior are recorded every 10 minutes when they are within sight and every 3 hours when they are not. This provides valuable data on their hunting patterns, habitat use, and overall well-being.
- **Real-time Communication:** Regular communication with headquarters through wireless technology ensures that any changes in the cheetahs' condition or behavior are promptly addressed.
- **Radio Telemetry:** Radio collars equipped with GPS or satellite transmitters allow researchers to track the cheetahs' movements and gather data on their location, habitat use, and migration patterns. This information is crucial for understanding how they are adapting to their new environment and identifying any potential challenges they might face.

This unwavering dedication to monitoring played a vital role in the success of the cheetah reintroduction programme. By providing a comprehensive understanding of the animals' needs and challenges, the teams helped pave the way for their long-term survival in their new home. In essence, the monitoring effort was a testament to India's commitment to restoring these majestic creatures to their rightful place in the ecosystem.





Beyond Borders, Beyond Boundaries: Adaptive Management Reshapes Cheetah Conservation

Cheetahs were equipped with radio collars, enabling continuous 24/7 monitoring of their movements. The use of radio telemetry facilitated active management interventions whenever cheetahs entered unsuitable habitats, provided swift compensation in cases of livestock depredation, and allowed for the investigation of cheetah mortality causes. If an individual was at risk of encountering unfavourable situations or locations, qualified personnel conducted immobilisation to safely bring the cheetah back.

At various instances, such as injury to animals, moving too close to human habitations, and cheetahs in Kuno, there have been complete immobilization, and it's noteworthy that there has been no mortality recorded during the immobilization and treatment procedures.



Jungle Jaunts: Inside the Hidden World of Cheetah Territoriality in Kuno

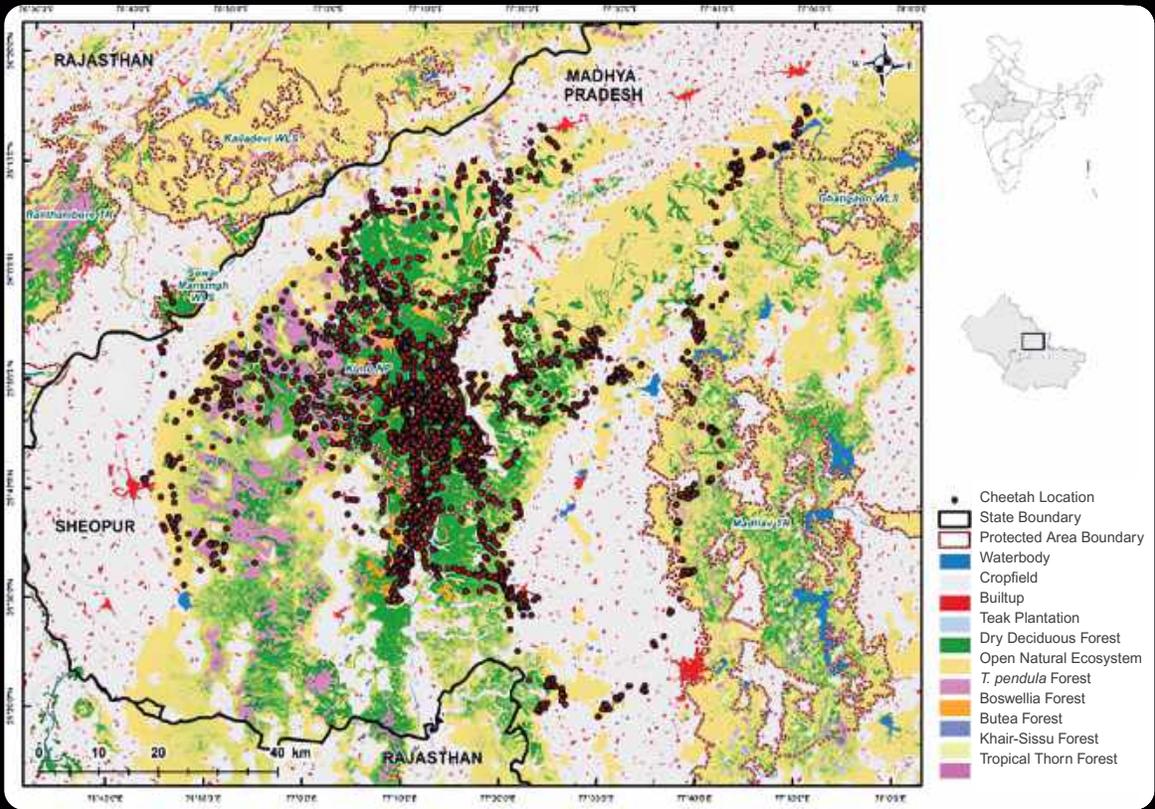
Cheetahs exhibit significant variation in home range across their distribution, with females generally occupying larger home ranges than males. Territorial males often share overlapping home ranges with multiple females. The size of cheetah home ranges is influenced by factors such as prey availability and density. In the Kuno landscape, released cheetahs displayed an average daily movement ranging between 3.23 (0.12 SE) and 6.05 (0.35 SE) km, with varying individual home range sizes. Coalition males, females with cubs, and solitary females exhibited distinct patterns in distance moved and home range sizes.

Coalition males exhibited a range of 643 to 685 km in total distance moved, with an average daily movement ranging between 3.23 (0.12 SE) and 6.05 (0.35 SE) km. Their home ranges vary from 716 to 1427 square kilometres. In contrast, females with cubs covered distances between 768 and 894 km, with an average daily movement ranging from 4.62 (0.33 SE) to 5.48 (0.28 SE) km. The home range for females with cubs extends from 3204 to 6888 square kilometres. Solitary female, covered a total distance of 561 km, exhibiting an average daily movement of 3.26 (0.23 SE) km, with home ranges spanning 47 square kilometres.

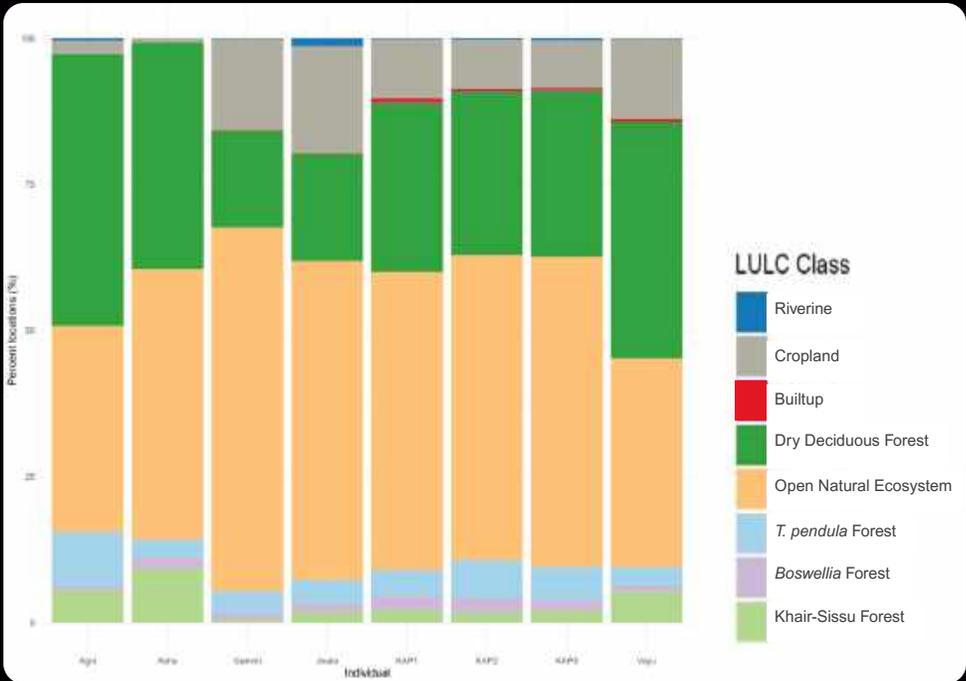


From Savanna to Scrubland: The Cheetah's Adaptation Odyssey in Kuno's Diverse Landscapes

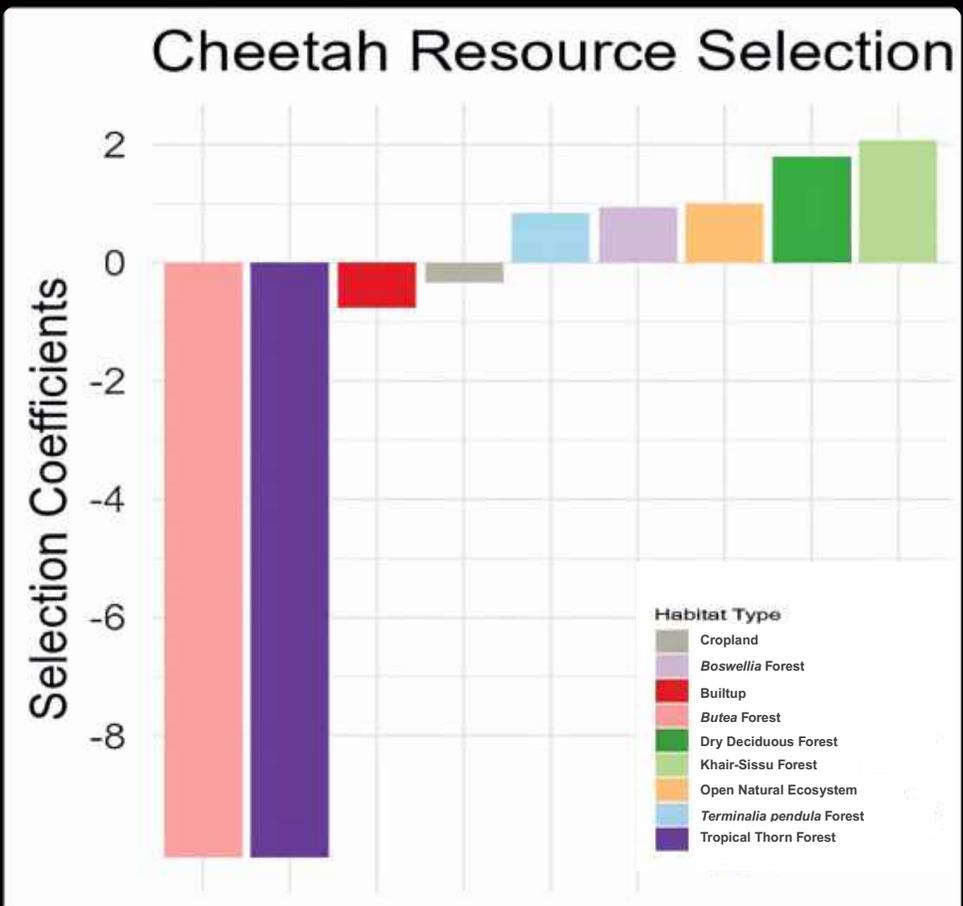
Utilizing the locations derived from radio collars affixed to cheetahs, an evaluation of habitat preference was conducted by employing the Resource Selection Function and Ivlev's index. This analysis specifically focused on free-ranging cheetahs, using only the animal locations within the confines of the National Park boundary. Cheetahs are using a mosaic of habitats, including mixed deciduous forests, open woodlands and grasslands, depending on their life history stage, as well as needs and adapting well to local conditions.



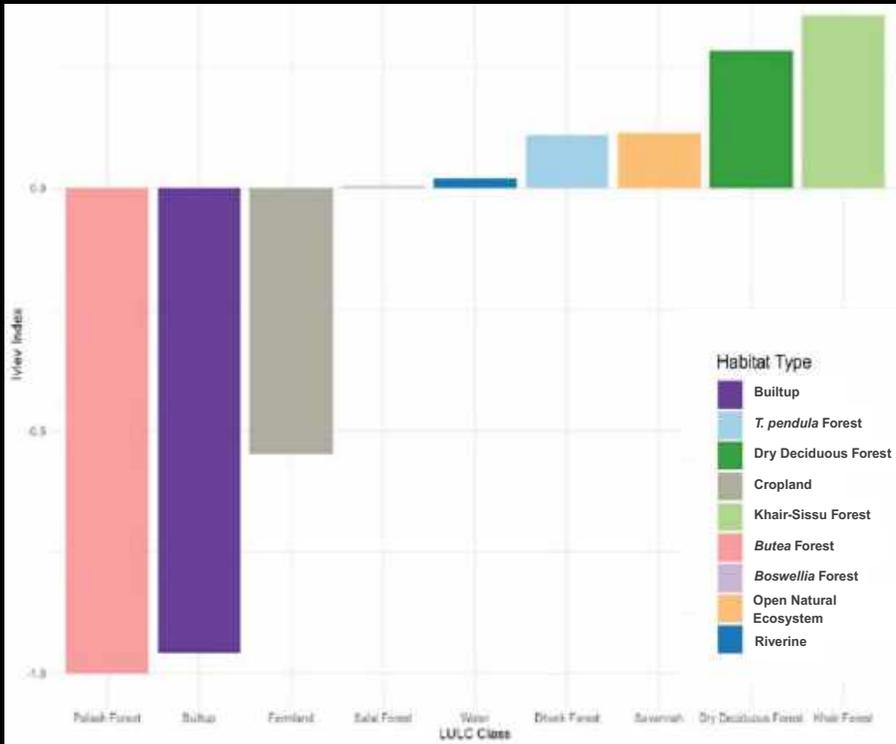
Percentage of free-ranging cheetah locations in each habitat type



Habitat Selection of free-ranging cheetahs in Kuno National Park



Habitat Selection of free-ranging cheetahs in Kuno National Park using Ivlev's Index



Spots of Joy: Marking a Milestone in Cheetah Conservation with India's Litters

In March 2023, Namibian female cheetah Jwala welcomed a litter of four cubs. The arrival of these cubs marks a significant event in the life cycle of the cheetah project, adding to the conservation efforts for this iconic species.

In January 2024, a remarkable milestone was achieved in cheetah conservation on Indian soil as Namibian female cheetah Asha gave birth to her litter. Subsequently, Jwala and South African cheetahs Gamini, Veera and Nirva have littered in 2024-25. Mukhi, the first Indian born cheetah gave birth to five cubs in November 2025. These events signify a crucial step forward in the ongoing efforts to reintroduce and establish cheetah populations in India. The arrival of these litters reaffirms the dedication to preserving and fostering the growth of cheetah populations in their historical habitat in India.



Predator's Tally: Tracking the Hunt in a Glimpse

Cheetahs, characterized by special adaptations, including semi-retractile claws and a robust dewclaw, employ high-speed chases to chase, trip and suffocate prey. Their slender bodies, elongated hind limbs, and muscular tails contribute to remarkable acceleration, while enlarged nasal passages enhance respiratory efficiency during pursuits, with a preference for small to medium-sized prey in African forests.

Predation events from five free-ranging cheetah social units (16 animals) in Kuno National Park, India, reveal a captivating pattern of prey selection and kill frequency. Based on a sample size of 223 successful hunts, this study reports a mean kill interval of 4.4 days (SE= 0.9 days). Notably, Chital constitute the main prey, comprising 42% of recorded kills. Sambar and Nilgai also appear in the tally, interestingly, with the majority targeting non-adult male individuals. This snapshot provides valuable insights into the predatory behavior of reintroduced cheetahs in Kuno, shedding light on their dietary preferences and assessing the requirement to manage the prey population necessary for establishing a viable cheetah population.



Guardians of the Fastest: A High-Level Symphony for Cheetah Conservation

Kuno National Park vibrates with a symphony of collaboration. High up on the podium, environment ministers orchestrate the rescue symphony, ensuring policy harmony for these precious felines. The monitoring of cheetahs is executed at the highest echelons, involving key stakeholders such as environment ministers and officials from the National Tiger Conservation Authority (NTCA), including the Member Secretary and Inspector General, alongside the active participation of researchers and scientists from the Wildlife Institute of India (WII). The Madhya Pradesh Forest Department plays a pivotal role, with a comprehensive involvement spanning from on-the-ground personnel to top-ranking officers. This collaborative effort underscores a holistic approach to cheetah conservation, integrating expertise and commitment across various levels of governance and scientific expertise.



Cheer of the Crowd: Empowering People to Become Champions for Cheetahs

In the realm of cheetah conservation in India, a program named “Cheetah Mitra” has been instituted to actively involve people, particularly from the local communities. This initiative encompasses awareness camps aimed at educating the public, fostering increased economic activities, and generating employment opportunities. Notably, the Honourable Prime Minister had engaged directly with the CheetahMitra initiative, showcasing a commitment to this cause. Many have transformed into Cheetah Mitra, emerging as everyday heroes dedicated to the conservation efforts for these majestic creatures. Over 450 “Cheetah Mitras” in 80 villages were involved in conservation efforts, including tracking and protection activities. The Madhya Pradesh Forest Department provided direct employment to locals as cheetah trackers and in protection roles, while also offering skill development training for nature guides and wildlife safari drivers. The potential for cheetah tourism has led to increased economic activities in the Kuno NP region, creating employment opportunities and positive local engagement.



From Grasslands to Global Alliance: Building a Bridge for the Cheetah's Future

In February 2023, an international consultative workshop on cheetah ecology and management convened in Shivpuri. Attended by wildlife and cheetah experts from both national and international domains, including scientists, researchers, and field staff, the workshop aimed to update project partners, share expertise, and enhance knowledge. Following project progression, the National Tiger Conservation Authority (NTCA) established a Cheetah Steering Committee in 2023, comprising 11 domain experts such as carnivore biologists, wildlife veterinarians, ecologists, and sociologists. This committee oversees the cheetah project, providing monitoring, advice, and guidance as the release of cheetahs into free-ranging conditions unfolds in accordance with a phased plan developed through extensive consultations and expert recommendations. Active collaboration with South Africa, Namibia, Kenya, and Botswana for sourcing animals to boost the Indian cheetah population.



Whispers of the Wind: Three Years On, Cheetahs Echo Hope for India's Wildlife

Celebrating the yearly milestone of Project Cheetah in India on September 17, various events took place at Kuno National Park and Gandhisagar over the years. Attended by officials from the Ministry of Environment and Forest and Climate Change (MoEFCC), NTCA, and the Madhya Pradesh Forest Department, the program included an exhibition and interactions with Cheetah Mitras. The event featured the release of the annual report and a significant donation from HeroMoto Corp in 2023, contributing 50 motorbikes to enhance the mobility of frontline staff.

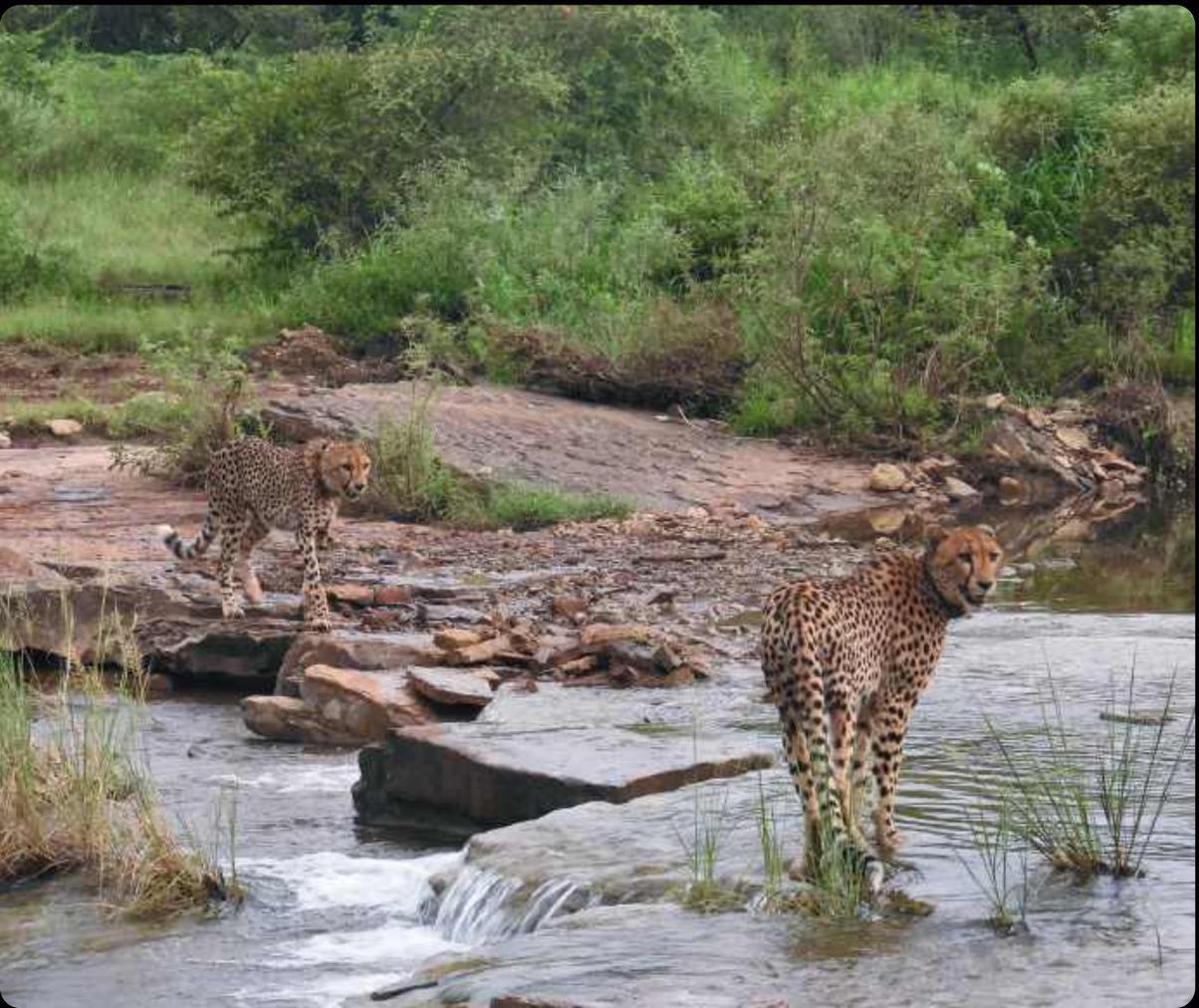


Frontline staff of Kuno National Park were commended for recognizing their vital contributions. Representatives of local Mongia tribes were acknowledged for their dedication to cheetah conservation, showcasing the collaborative spirit of local communities in the project's success. During the event in 2024, local volunteers/Cheetah Mitras were felicitated for their active role in the project. A female cheetah, Dheera, was released in Gandhisagar during this day in 2025.



Footprints on Thin Ice: The Delicate Journey of Cheetah Reintroduction in India

The reintroduction of cheetahs in India's Kuno National Park has witnessed the mortality of seven individuals within one year. Diverse causes, including bacterial infection, maggot infestation, renal failure, territorial conflict, and heat stress, were identified. While anticipated and addressed in the Action Plan, this rate exceeds zero-mortality scenarios. Notably, no human-induced mortalities were recorded among free-ranging individuals, despite traversing human-dominated landscapes. This aligns with comparable post-release mortalities observed in African reintroductions, highlighting common challenges in large carnivore reintroductions. Factors contributing to initial vulnerability include adaptation to a new biological clock, unfamiliar terrain and climate, and adjusting to local prey availability. To mitigate these challenges, an intensive post-release monitoring and rapid response protocol was implemented, including prompt capture and observation of all released individuals. This ongoing research aims to elucidate factors influencing mortality patterns, optimize adaptive management strategies, and ultimately increase the success of the cheetah reintroduction program in India.



Kuno Chronicles: Unveiling the Cheetah Odyssey as of December 07, 2025

In the heart of India, Kuno National Park echoes with the soft purrs and playful pounces of a diverse ensemble with 27 cheetahs (9 adults and 18 young).

Closed Natural Area Spotlight

Amidst the symphony of nature in Kuno, the sweetest melody of all - nine precious cubs were added to the population in 2025, India's own hope for the future. Nirva, a South African beauty with her three Indian born cubs (1 female & 2 males), graces a large compartment. Gaurav, the Namibian brave, roams the adjacent compartment. In the nearby compartment is Mukhi, the star, the firstborn Indian cheetah cub, joined the main act with her five newborn cubs.

Free-ranging Sprinters

Agni and Vaayu (males), two South African veterans, have been roaming in the wilderness of Kuno since December 2024 for nearly a year. Asha, the Namibian charmer and her three Indian born young males were released together early this year, with the young that had separated a while ago are successfully moving around as a coalition. Simultaneously released Jwala, another Namibian gem and her Indian born young of the second litter (2 males and 1 female) are exploring the vast wilderness of Kuno landscape. Similarly, subsequently released Gamini, the South African enigma, and her three Indian born young (1 males and 2 females) are also exploring the back and beyond of Kuno. Veera, the spirited South African recently released with her Indian born male cub is navigating the forests of Kuno.





Purr-fect Partners: From Apex Predator to Ecosystem Architect, Cheetahs Rebalance the Jungle

Embarking on the mission to restore India's lost natural heritage, this initiative serves as a flagship for rejuvenating savannahs, open lands, and grassland ecosystems. At its core, it aims to fortify the revival of some of the most endangered species that are currently in jeopardy. Beyond safeguarding biodiversity, the project also plays a pivotal role in ensuring water security while actively contributing to global climate change mitigation goals through carbon sequestration via ecosystem restoration activities. Furthermore, this comprehensive approach extends to promoting livelihood opportunities and creating avenues for enhanced human-wildlife coexistence, fostering a harmonious balance between nature and communities.

Cheetah Rendezvous: Gandhisagar Rolls Out the Red Carpet

As the cheetahs sprint forward, Gandhisagar unveiled its vision for a thriving Indian habitat. Meticulous preparations were undertaken for creating a second sanctuary for these iconic big cats, culminating with the initial arrival of two males, Prabhas and Pavak, in April 2025, and subsequently, Dheera, a female of South African origin, was shifted from Kuno in September 2025. Prior to this, a large fenced Closed Natural Area (~ 64 km²) was constructed to ensure a suitable and secure habitat for the cheetahs upon their arrival. Additionally, a comprehensive status assessment of herbivores and predators within the sanctuary was carried out to gauge the existing ecological dynamics. To oversee and evaluate the overall readiness of Gandhisagar Wildlife Sanctuary for the cheetah introduction, the Cheetah Steering Committee under the Government of India, NTCA and WII conducted multiple reviews. These thorough evaluations ensured that the sanctuary is adequately equipped and prepared to support the successful integration and conservation of cheetahs within its natural landscape.

While securing the cheetah population is underway in Gandhisagar, deliberations are on for developing other areas such as Nauradehi (Madhya Pradesh), Banni (Gujarat) and Shahgarh in Rajasthan as potential landscapes for cheetah metapopulations.



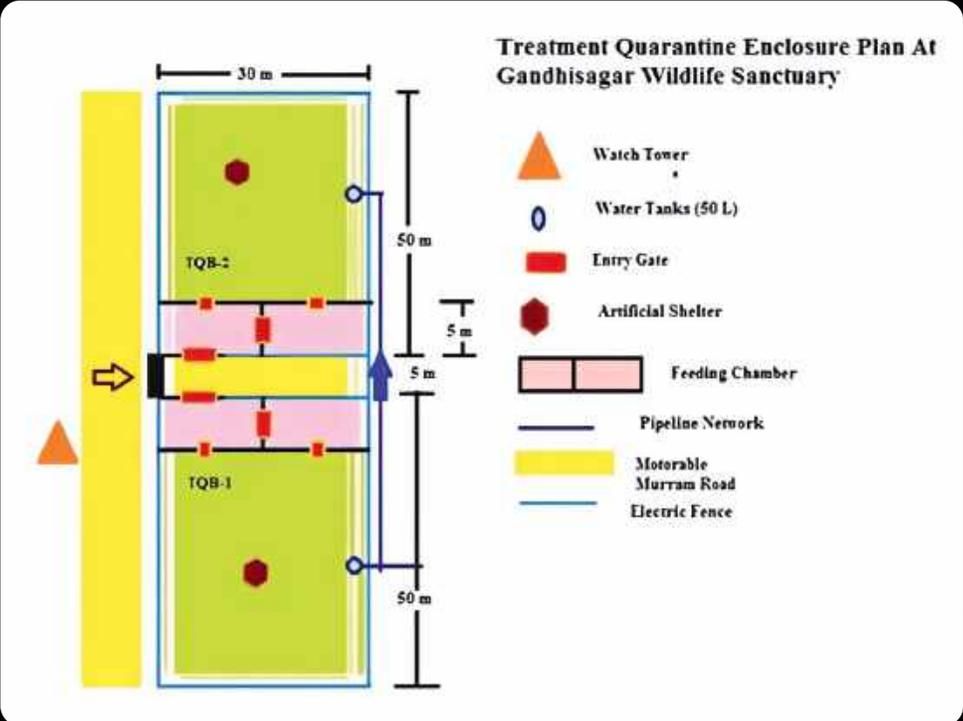


Savanna habitats in Gandhisagar ideal for cheetah



Predator-Proof Solar Electric Fence for Cheetah Reintroduction

Quarantine Boma and Treatment Boma



Quarantine Boma and Treatment Boma



Eradication of Weed from QB



Watering in QB for green grass



Quarantine Boma (QB)



Mound inside QB



Shade for Cheetah



Water source inside QB



Status Assessment of Herbivores and Predators:



Line Transects



Data collection using M-STRIPES Ecological App



Camera Trap Placement

Community Outreach, Awareness and Capacity Building



Hon. Chief Minister of Madhya Pradesh and Hon. Union Minister of Forest, Environment and Climate Change Felicitating Cheetah Mitras



Regular meeting with local villagers



Training in prey and habitat data collection using MSTRiPES

Reviewing the preparedness of Gandhisagar Wildlife Sanctuary by Cheetah Steering Committee & NTCA



Latitude: 24°33'56"N
Longitude: 75°32'54"E
Elevation: 405.36 m
Accuracy: 4.76 m
Time: 15-09-2023 Fri
Time zone: GMT+05:30
Note: End point

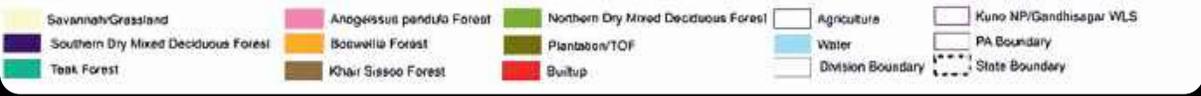
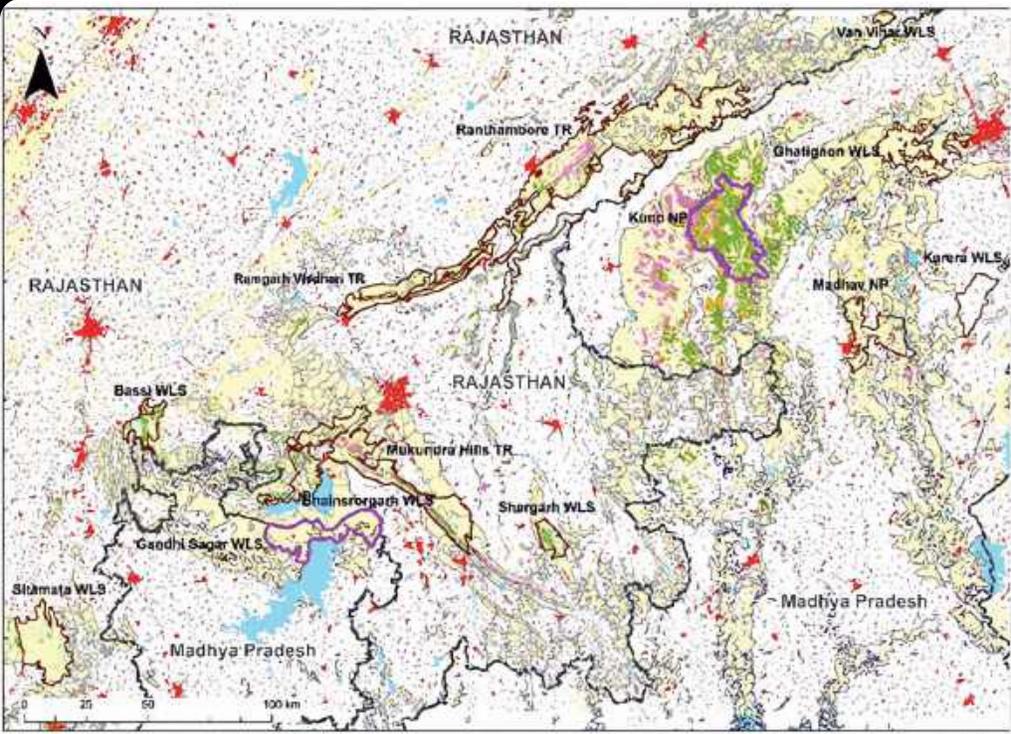
Where the wild runs free: Cheetah Metapopulation Management Landscape

Interstate Cheetah Conservation Complex

As recommended by the action plan, cheetahs in Kuno National Park (NP), as well as Gandhi Sagar Wildlife Sanctuary (WLS) and their adjacent landscapes, will be managed as a metapopulation subsequently, along with a couple of other sites. As the landscapes surrounding these two sites abut each other, the combined landscapes of Kuno and Gandhi Sagar together can constitute the Kuno-Gandhi Sagar cheetah landscape for metapopulation management of cheetah as an interstate cheetah conservation complex. This area is located along the state border of Rajasthan and Madhya Pradesh (M.P.), with the majority of the area situated in the Chambal River basin. Kuno NP is patchily connected to Gandhi Sagar WLS in the southwest through the territorial forest divisions in Rajasthan and M.P. These forest patches cumulatively cover an area of ~17,000 km² in M.P. (area ~10,500 km²) and Rajasthan (area ~6,500 km²). This larger Kuno Gandhi Sagar landscape is situated in 16 districts of M.P. and Rajasthan. Additional districts, including Uttar Pradesh, adjacent to this landscape, would be incorporated as part of the landscape, depending on the cheetah's movement and use of these areas.



The majority of the area under the administration of the forest department is of the grassland/savanna type (70%), and 14% is forested. Further, a network of 17 Protected Areas distributed in the landscape, with some requiring various degrees of management and restorative inputs to cumulatively enhance ecosystem services and biodiversity values with inclusive approaches, provides ideal stepping stones/stopovers/refuges for cheetah movement and dispersal intrinsic to viable metapopulation dynamics. For holistic management of the landscape, prioritisation of areas for restoration of prey and habitat is ongoing, along with the development of an inter-sectoral management plan.



Sprinting Ahead: Way forward

The Cheetah Project stands on a promising trajectory, demonstrating the efficacy of collaborative governance in its pursuit of success.

- The release of captured cheetahs into the wild is intricately planned, employing a staggered approach for a seamless transition.
- Initiatives for cheetah reintroduction at additional sites are underway, underscoring the project's commitment to extending its positive impact.
- A robust management and scientific monitoring framework is in place, encompassing a thorough analysis of daily monitoring and telemetry data.
- Information gathered from surveillance efforts is diligently collated and interpreted to inform decision-making processes.
- Health monitoring, evaluations of prey base, and ongoing community welfare initiatives in fringe areas are integral components of the project's holistic strategy.
- The Project Cheetah's reach has broadened significantly with the introduction of the International Big Cat Alliance (IBCA), creating new opportunities for collaboration and collective endeavors in the realm of big cat conservation.



Beacon of Hope: Cheetahs as Guardians of Grasslands, Catalysts for Conservation Across India

From habitat restoration to community engagement, the journey to a future where cheetahs and people flourish together has started. Employing a core-buffer-corridor strategy, designated reserves have been established, drawing insights from the experiential knowledge gained through Project Tiger. This approach seamlessly integrates with existing schemes, ensuring a cohesive conservation framework. The management practices are characterized by an active and adaptive approach, adhering to established protocols. Stakeholders are incentivized to actively participate in the conservation efforts. The overarching strategy includes targeted measures to preserve distinctive habitats, adding a layer of precision to the broader conservation initiative.





Published By:

National Tiger Conservation Authority

B-1 Wing, 7th Floor, Pt Deendayal Antyodaya
Bhawan, CGO Complex, New Delhi-110 003.
India.

Tel: +91 11 24367837-39

Fax: +91 11 24367836

Website: <https://ntca.gov.in>

Twitter: https://twitter.com/ntca_india

CHEETAHS ARE BACK IN INDIA

RESTORING NATION'S NATURAL HERITAGE
REVIVING OPEN NATURAL ECOSYSTEMS



Edited by Bipin C.M.



भारतीय वन्यजीव संस्थान
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