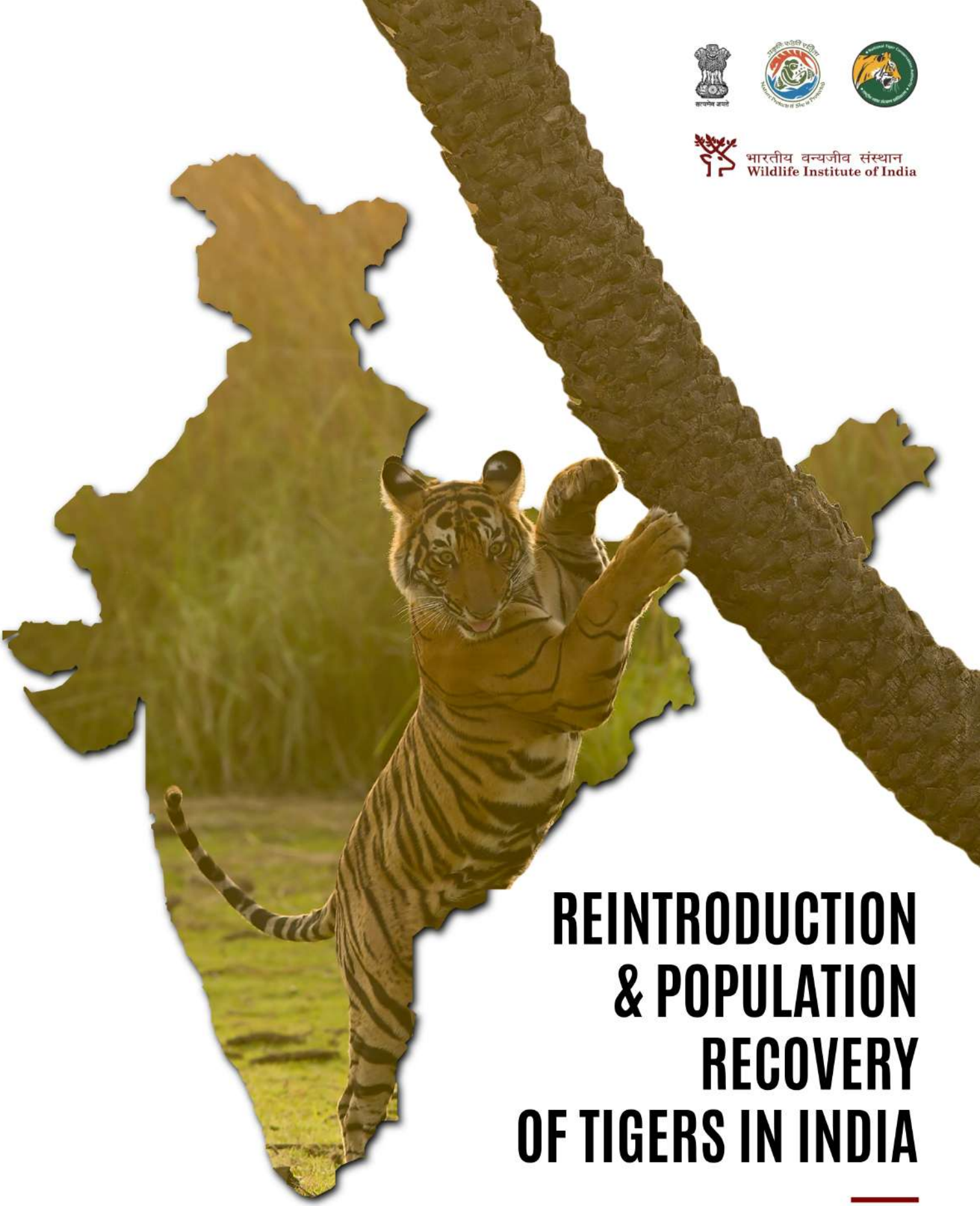
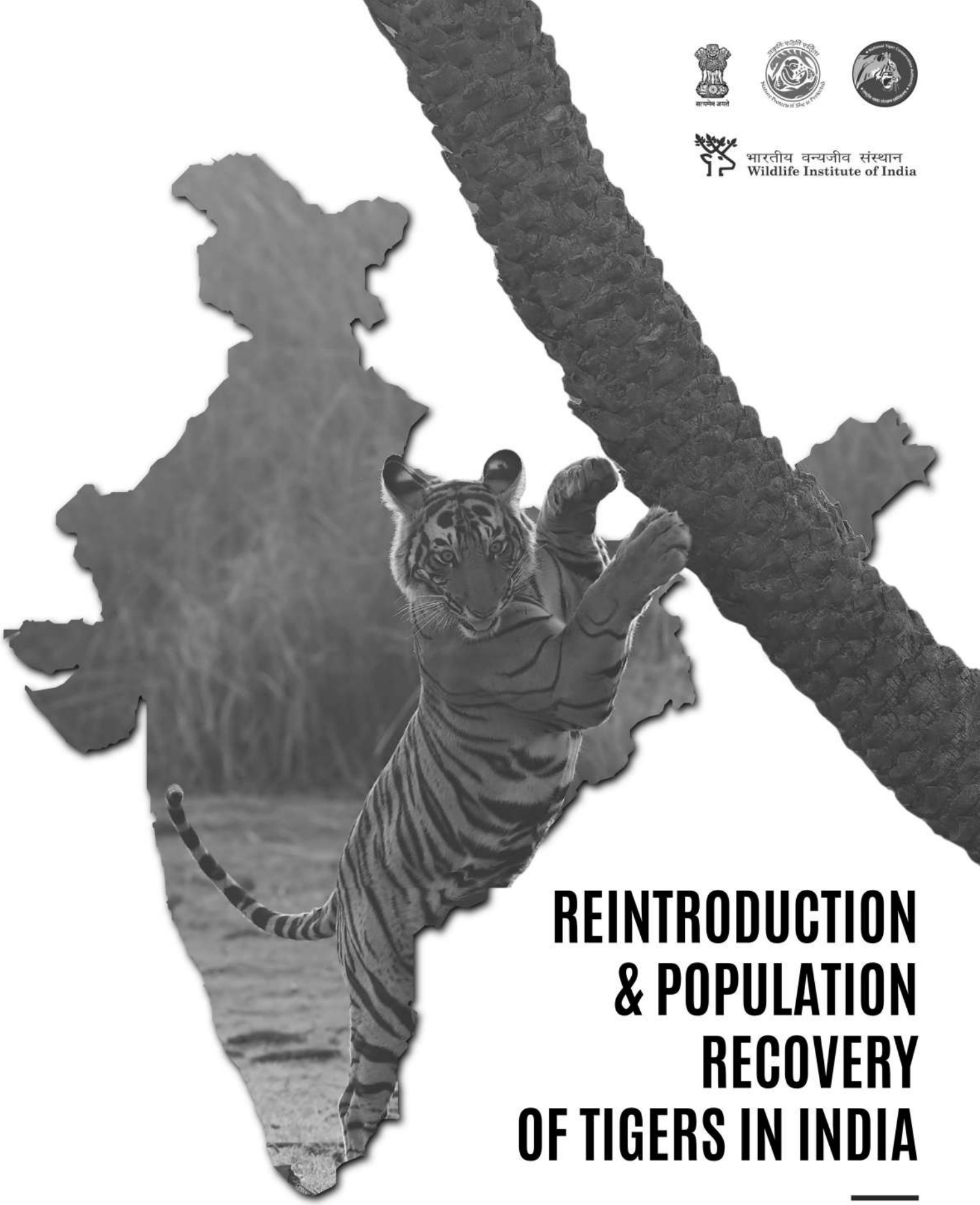


भारतीय वन्यजीव संस्थान
Wildlife Institute of India

REINTRODUCTION & POPULATION RECOVERY OF TIGERS IN INDIA

Field Experiences & Key Learnings

2026



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Published by:
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B-1 Wing, 7th Floor, Pt. Deendayal
Antyodaya Bhawan, CGO Complex
New Delhi, 110003

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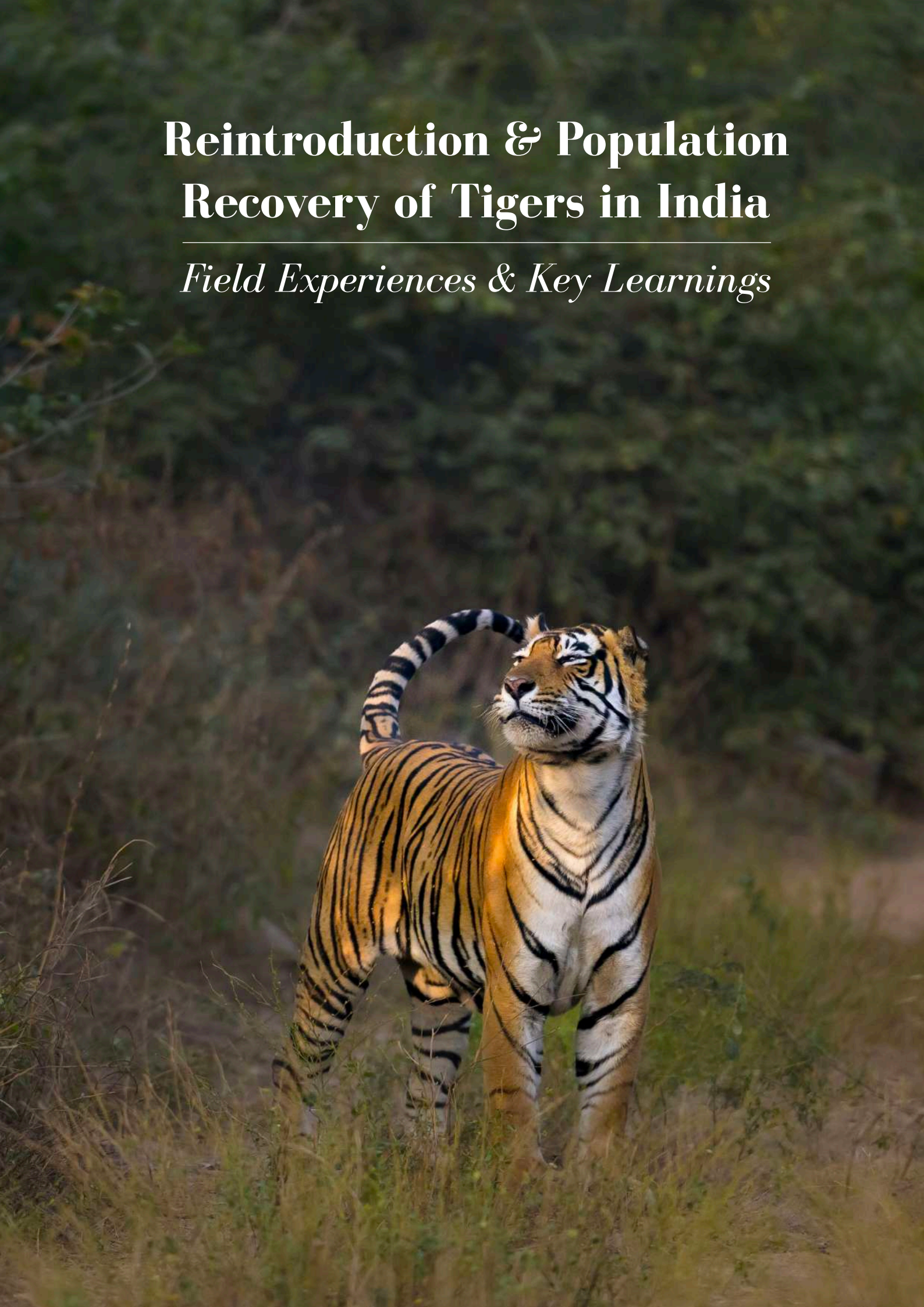
Design & Layout: Kashish Sherdia

Citation: NTCA-WII (2026). Reintroduction & Population Recovery of Tigers in India. Field Experiences & Key Learnings. National Tiger Conservation Authority. Wildlife Institute of India, Dehradun. P.p. 48.

Reintroduction & Population Recovery of Tigers in India

Field Experiences & Key Learnings



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INTRODUCTION

The tiger has always been central to India's natural heritage and conservation history. Beyond being one of the most recognised wild species globally, the tiger represents the ecological integrity of the landscapes in which it persists. Historically, widespread hunting by colonial rulers, princely states, and local elites, combined with habitat loss and declining prey populations, resulted in a severe reduction of tiger populations across India. To address this decline, Project Tiger was launched in 1973 and became one of the most significant wildlife conservation initiatives globally. Despite considerable success in protecting tiger populations, new conservation challenges emerged in the late twentieth and early twenty-first centuries. The illegal wildlife trade, particularly the demand for tiger body parts in international markets, contributed to increased poaching pressure on wild tiger populations. This resulted in severe declines in several tiger landscapes. During the early 2000s, the disappearance of tigers from Sariska Tiger Reserve and Panna Tiger Reserve exposed the vulnerability of isolated tiger populations and represented a major setback for tiger conservation in India. Although the Sariska crisis was a monitoring failure, it also transformed modern tiger management in India. It highlighted the importance of rigorous monitoring, improved protection, and science-based conservation planning. However, protecting existing populations alone was not sufficient. By this period, many tiger populations had become geographically isolated due to habitat fragmentation and loss of connectivity. Several historically occupied landscapes had either lost their tiger populations completely or had limited opportunities for natural recolonisation due to barriers between source populations and suitable habitats. In such situations, habitat protection alone could not ensure recovery, and active management interventions became necessary.

In fragmented landscapes, relying solely on natural colonisation was often considered insufficient because dispersal of tigers through degraded corridors was uncertain, slow, and vulnerable to increasing anthropogenic pressures. Therefore, active reintroduction was considered necessary in landscapes where suitable habitat existed but natural recovery was unlikely within a reasonable timeframe. Potential source populations were identified based on ecological suitability, population strength, genetic considerations and geographical proximity, from which tigers could be translocated to restore lost or declining populations. However, the objective of such interventions was not merely to introduce individual tigers but to establish a self-sustaining population with adequate demographic stability and genetic diversity. Achieving this required securing large inviolate areas capable of supporting breeding populations, restoring wild ungulate prey populations through habitat improvement and prey augmentation where necessary, and strengthening protection regimes to prevent poaching and other illegal activities. Thus, tiger reintroduction represents a comprehensive conservation intervention that integrates animal translocation with habitat restoration, prey recovery, and long-term landscape management.

This led to the development of scientifically planned tiger reintroduction programmes in India. The Sariska crisis raised a fundamental conservation question: could a tiger population that had disappeared completely be restored? The answer emerged through one of India's first systematic tiger reintroduction efforts. The recovery of tiger populations in Sariska and Panna demonstrated that restoration of lost populations was possible; however, these programmes also highlighted that translocation alone cannot guarantee success without suitable habitat, adequate prey populations, effective protection, and long-term monitoring.

A tiger population represents more than the presence of individual animals; it requires a functioning ecosystem capable of supporting long-term persistence. As apex predators, tigers regulate prey populations and influence ecological processes that shape forest ecosystems. Their presence contributes to maintaining predator–prey interactions, vegetation dynamics, and biodiversity patterns. The disappearance of tiger populations can therefore result in broader ecological consequences, including changes in herbivore abundance, vegetation structure, and ecosystem functioning. Consequently, tiger restoration is increasingly viewed as a landscape-level conservation strategy rather than simply an exercise in relocating animals.

However, tiger restoration efforts have not always produced successful outcomes. The experience of Satkosia Tiger Reserve demonstrated the complexities associated with tiger translocation and the importance of addressing ecological and management constraints before reintroduction. In recent years, India has increasingly adopted landscape-based approaches for tiger recovery. Several landscapes, including Mukundara Hills Tiger Reserve, Ramgarh Vishdhari Tiger Reserve, Navegaon–Nagzira Tiger Reserve, Rajaji Tiger Reserve, Madhav Tiger Reserve, and Sahyadri Tiger Reserve, represent different stages and objectives of tiger recovery. In some cases, the goal has been to restore populations lost from historical habitats, while in others, interventions aim to strengthen existing populations by increasing abundance, improving genetic connectivity, reducing isolation, and supporting long-term demographic stability.

The Indian experience of tiger reintroduction over the past two decades provides important lessons for conservation. Successful restoration requires more than moving tigers from one landscape to another. It depends on long-term ecological planning, habitat suitability assessment, prey recovery, protection, scientific monitoring, and cooperation among conservation agencies and local communities. The story of tiger recovery in India is therefore not only about increasing tiger numbers but about restoring ecological processes and maintaining resilient landscapes. This document gives the details of translocation sites and their present tiger status.

Tiger reintroduction follows a systematic framework beginning with the identification of site(s) and addressing the ecological and anthropogenic stressors that caused population decline/extinction. The process involves augmenting habitats (if needed), restoring prey populations, strengthening protection, selecting suitable source populations, carefully translocating and monitoring the reintroduced individuals, and ensuring long-term landscape connectivity to establish a viable and self-sustaining tiger population.

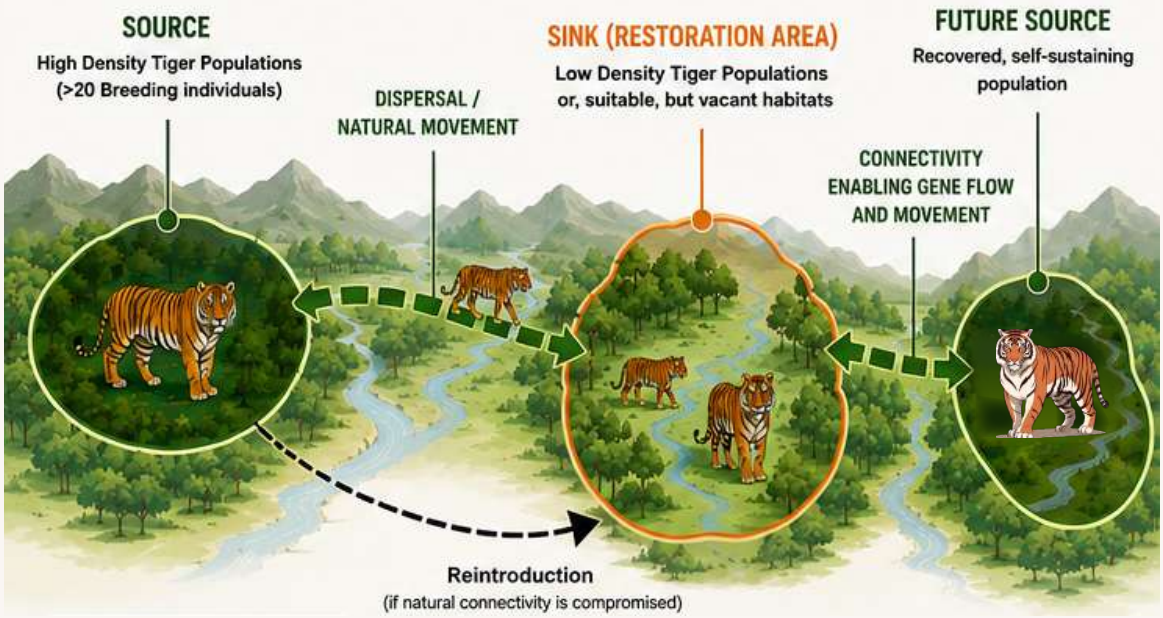
SOURCE–SINK LANDSCAPE MODEL

Tiger reintroduction works best within a connected landscape. High density large tiger populations (>20 breeding units) considered as source areas support the recovery of sink areas in the landscape (rescue effect) through colonization/reintroduction.

SOURCE
Areas with viable, self-sustaining tiger populations.

SINK (RESTORATION AREAS)
Areas where tigers are absent or in very low numbers but habitat is suitable for recovery.

CORRIDOR / CONNECTIVITY
Habitat linkages that enable natural movement, gene flow and dispersal.



KEY CONCEPT

Source populations have higher numbers and productivity. They act as reservoirs that produce dispersing individuals.

Sink areas lack viable populations due to past extirpation but can support tigers once habitats are restored and threats are removed.

HOW THE MODEL WORKS

1

Source populations often operates at stable state

2

Individuals dispersed from the source areas to nearby vacant habitats (sinks)

3

If natural dispersal is limited, tigers are translocated.

4

In sink areas, habitat restoration and prey recovery support survival.

5

Tigers establish, breed and population increases.

6

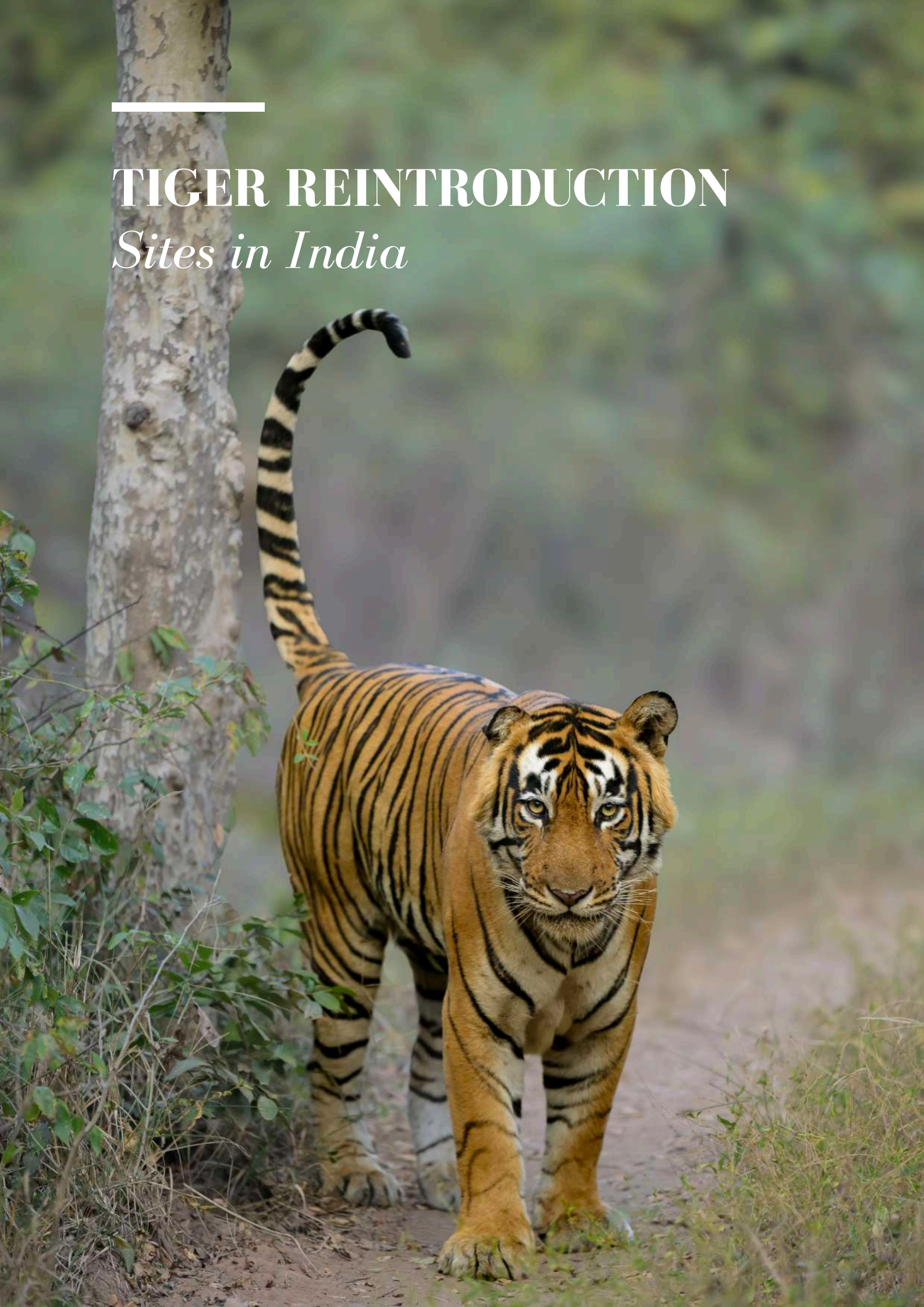
Recovered areas become source population over time, contributing to establishing the meta population framework

OUTCOME

A connected landscape of source and restored populations ensures long-term persistence, genetic diversity, resilience and expansion of tigers across their historical range.

TIGER REINTRODUCTION

Sites in India

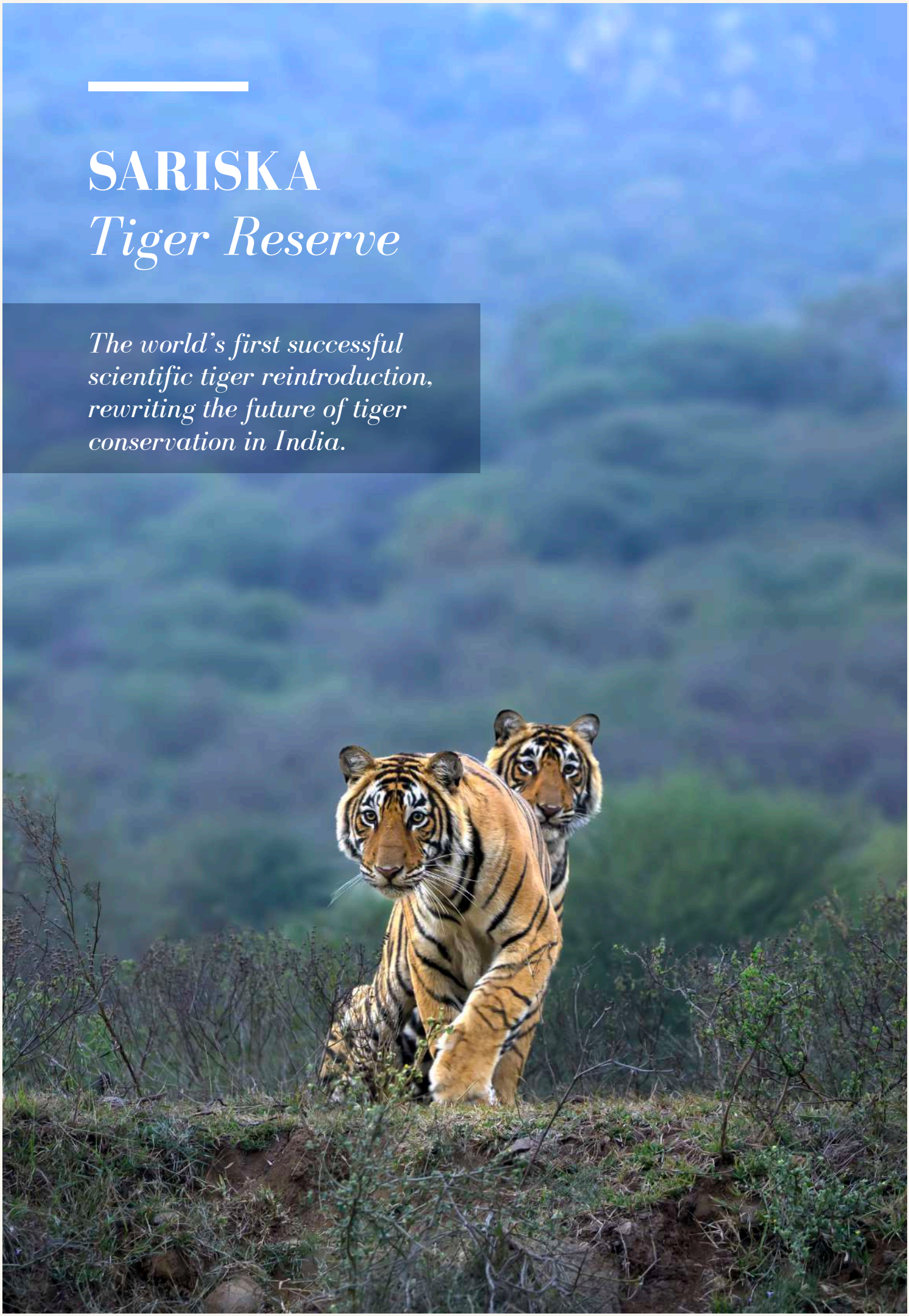


S. No.	Reintroduction Site	Year	Type of intervention	Source site	Tiger Population		
					Before Reintro-duction	Initially Reintro-duced	Present Popula-tion
1	Sariska Tiger Reserve, Rajasthan	2008	Reintroduction	Ranthambhore Tiger Reserve, Rajasthan	0	3 (1M, 2F)	56
2	Panna Tiger Reserve, Madhya Pradesh	2009	Reintroduction	Kanha, Bandhavgarh & Pench Tiger Reserve, Madhya Pradesh	0	3 (1M, 2F)	88
3	Sanjay Dubri Tiger Reserve, Madhya Pradesh	2013	Supplementa-tion/ Augmen-tation	Panna Tiger Reserve, Madhya Pradesh	8	1(M)	24
4	Mukundara Hills Tiger Reserve, Rajasthan	2018	Reintroduction	Ranthambhore Tiger Reserve, Rajasthan	0	2 (1M, 1F)	7
5	Satkosia Tiger Reserve, Odisha	2018	Reintroduction	Kanha & Bandhavgarh Tiger Reserve, Madhya Pradesh	1	2 (1M, 1F)	0
6	Veerangana Durgavati Tiger Reserve, Madhya Pradesh	2018	Reintroduction	Kanha & Bandhavgarh Tiger Reserve, Madhya Pradesh	0	2 (1M, 1F)	30
7	Rajaji Tiger Reserve (Western part), Uttarakhand	2020	Supplementa-tion/ Augmen-tation	Corbett Tiger Reserve, Uttarakhand	0	5 (2M, 3F)	5
8	Ramgarh Vishdhari Tiger Reserve, Rajasthan	2022	Supplementa-tion/ Augmen-tation	Ranthambhore Tiger Reserve, Rajasthan	1	1 (F)*	8
9	Navegaon–Nagzira Tiger Reserve, Maharashtra	2023	Supplementa-tion/ Augmen-tation	Tadoba-Andhari Tiger Reserve, Maharashtra	8	3 (3F)#	23
10	Madhav National Park, Madhya Pradesh	2023	Reintroduction	Satpura & Bandhavgarh Tiger Reserve, Madhya Pradesh	0	3 (1M, 2F)	8
11	Sahyadri Tiger Reserve, Maharashtra	2025	Reintroduction	Tadoba Andhari & Pench Tiger Reserve, Maharashtra	4	3 (F)$	7
12	Similipal Tiger Reserve, Odisha	2024	Supplementa-tion/ Augmen-tation	Tadoba Andhari Tiger Reserve, Maharashtra	16	2 (F)	32

*1 male was present during the time of reintroduction
7 males were present during the time of reintroduction
$ 4 males were present during the time of reintroduction

SARISKA
Tiger Reserve

The world's first successful scientific tiger reintroduction, rewriting the future of tiger conservation in India.

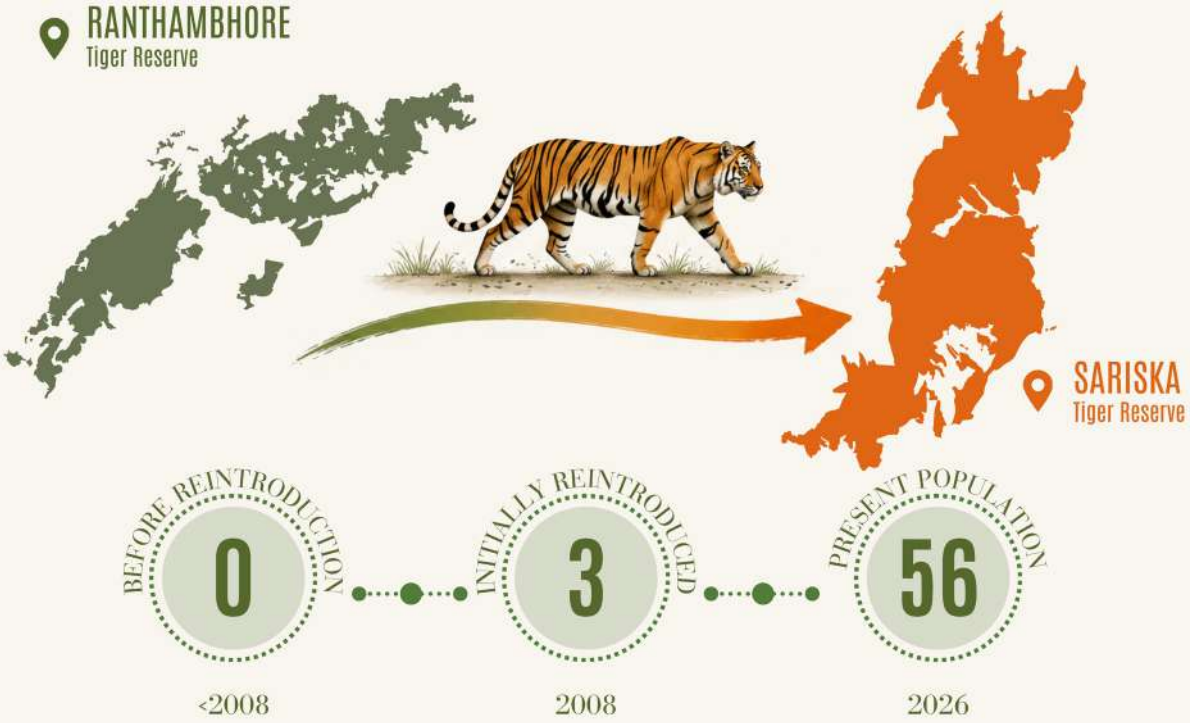


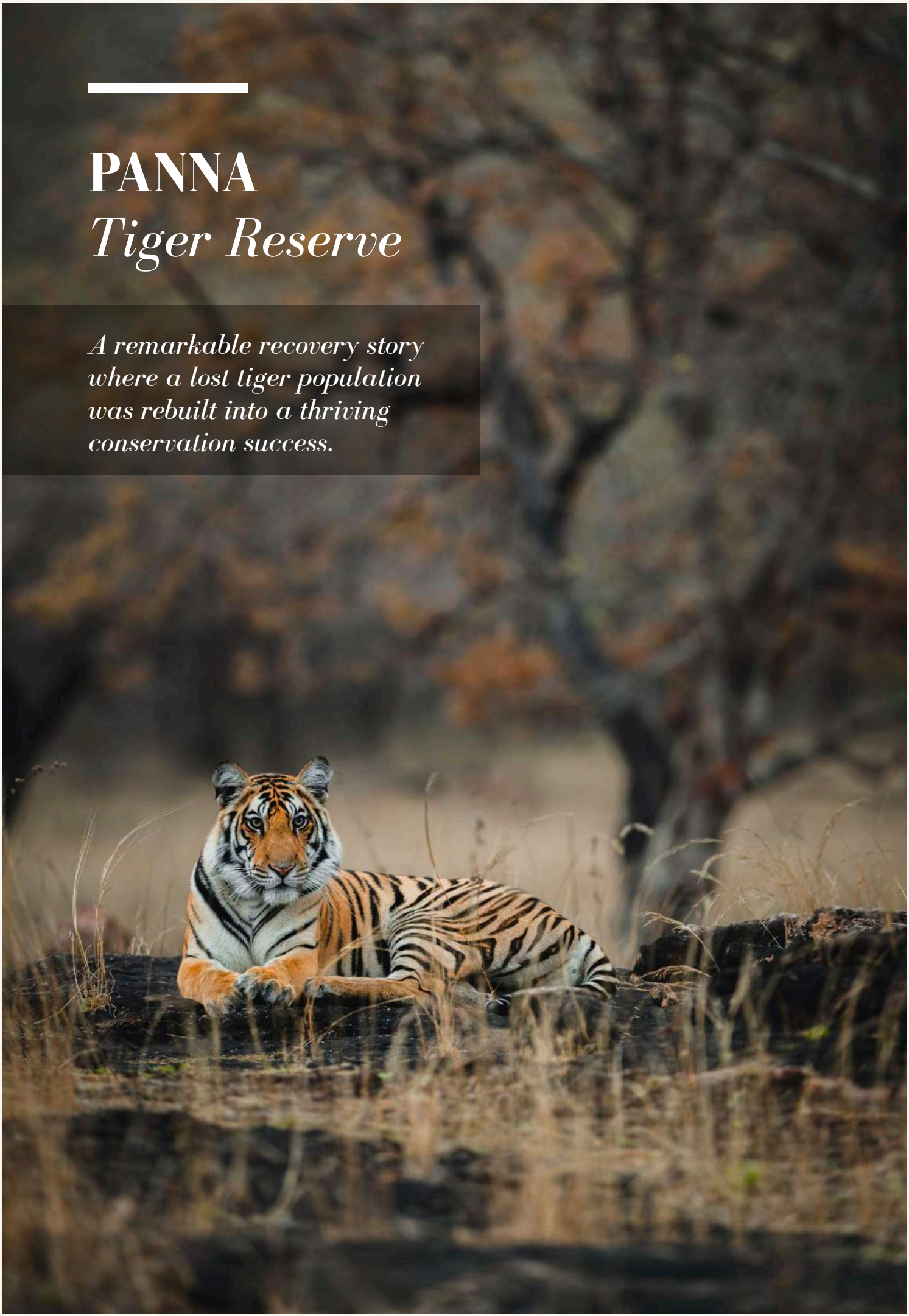
Sariska represents the first and most widely recognised example of tiger reintroduction in India. Located in the Aravalli landscape of Rajasthan, Sariska historically supported a viable tiger population and was among the important tiger habitats of northwestern India. However, by the early 2000s, intensive poaching led to the disappearance of its entire tiger population. The confirmation of tiger extinction from Sariska in 2005 created a major conservation crisis and highlighted the need for stronger monitoring and protection mechanisms.

Following the loss of tigers, the Rajasthan Forest Department, National Tiger Conservation Authority, and Wildlife Institute of India initiated a planned tiger restoration programme. Since suitable habitat and prey populations were still available, the focus shifted from habitat protection alone to active recovery of the predator population. Tigers from Ranthambhore Tiger Reserve were selected as founder individuals because they belonged to the same regional population and represented a suitable source population.

The first tiger was translocated to Sariska on 28 June 2008. The process involved extensive preparation, including strengthening protection, monitoring prey populations, and continuous tracking of relocated individuals through radio-collaring and camera trapping. The programme became a landmark in Indian conservation history. Tigers successfully adapted to the new environment, breeding occurred, and the population gradually increased. Sariska demonstrated that tiger populations could be restored after local extinction if ecological conditions, management capacity, and long-term protection were ensured. It also became a model for future wildlife restoration programmes in India and internationally.

At present, Sariska supports a growing tiger population of 56 (including cubs) and has regained its status as an important tiger landscape in Rajasthan. However, continued monitoring, habitat management, and connectivity with surrounding landscapes remain essential for maintaining long-term population viability.



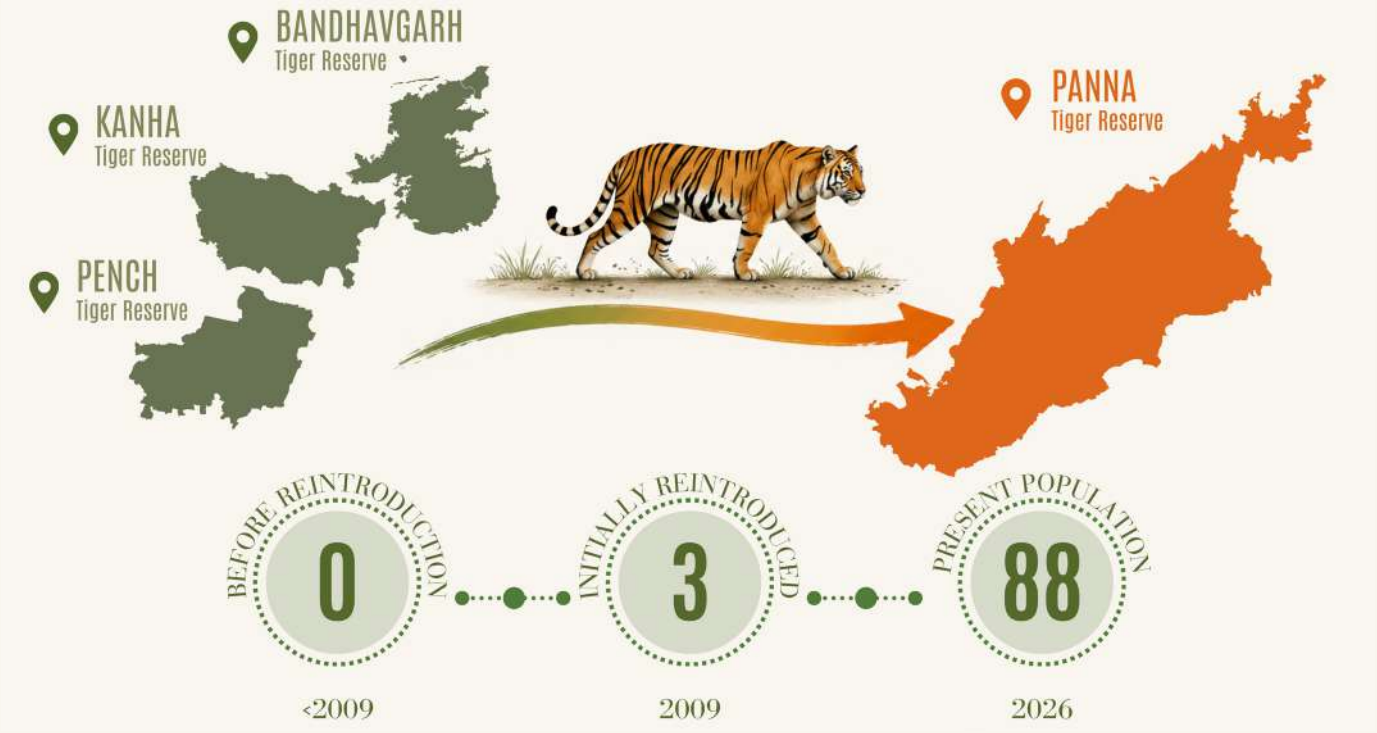


PANNA
Tiger Reserve

A remarkable recovery story where a lost tiger population was rebuilt into a thriving conservation success.

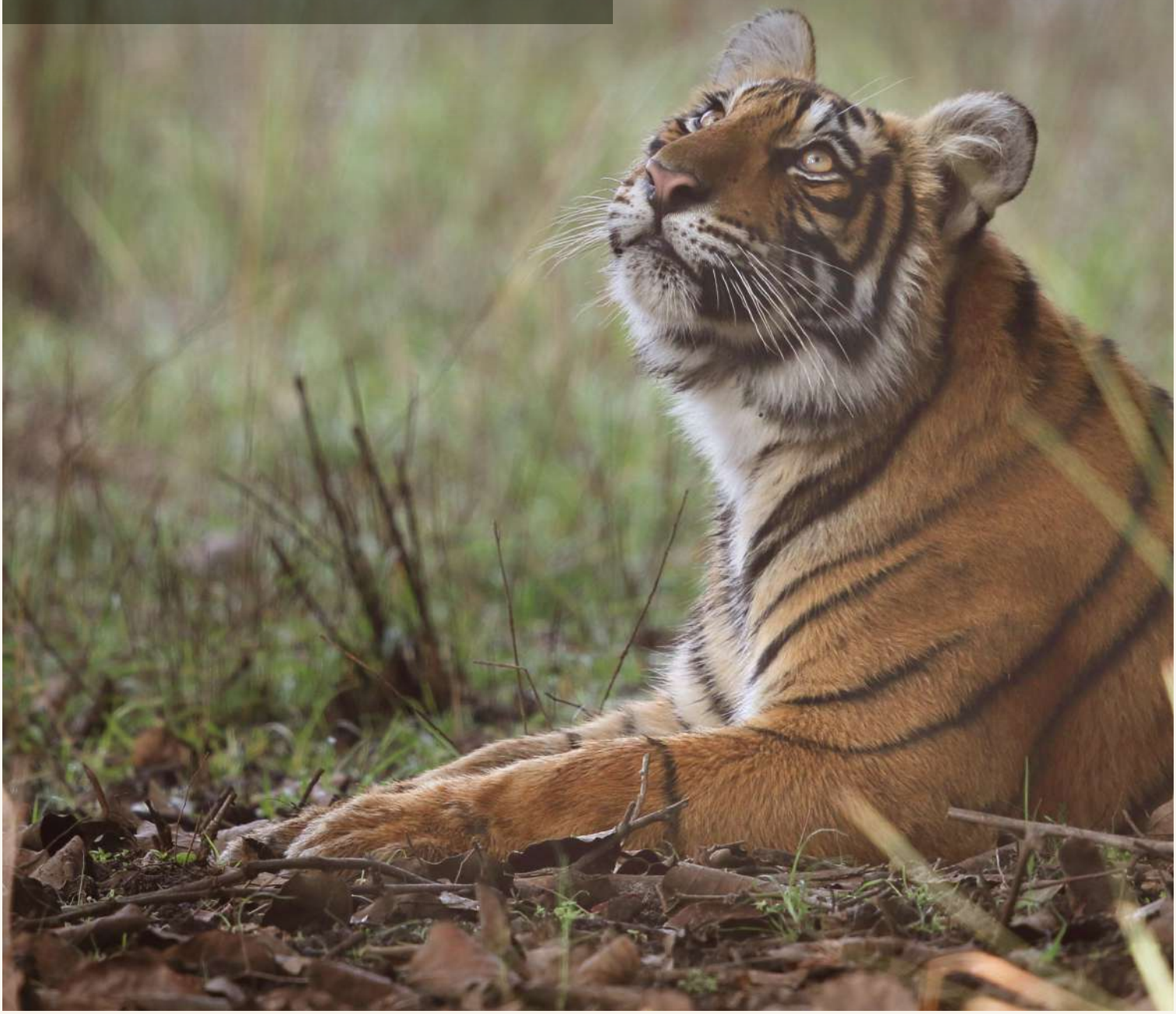
Panna Tiger Reserve provides another important example of tiger reintroduction after severe population decline. Located in the Vindhyan landscape of Madhya Pradesh, Panna historically supported a healthy tiger population. However, during the early 2000s, extensive poaching resulted in a dramatic decline, and by 2009 the reserve had lost its breeding tiger population.

The disappearance of tigers from Panna was not due to habitat loss. The reserve still retained suitable forests, prey populations, and ecological conditions necessary for tiger recovery. Therefore, active restoration was considered feasible. In 2009, a tiger reintroduction programme was initiated by bringing individuals from other tiger reserves of Madhya Pradesh, including Kanha, Bandhavgarh, and Pench. The restoration strategy focused on establishing a breeding population through careful selection of founder individuals, intensive monitoring, and improved protection. Radio-collaring and camera trapping were used to monitor movements, survival, reproduction, and adaptation of relocated tigers. Panna became one of the most successful examples of tiger recovery in India. The reintroduced tigers bred successfully, and the population expanded naturally. The success of Panna demonstrated the importance of maintaining ecological suitability even after population collapse. It also highlighted that tiger recovery depends not only on releasing animals but also on preventing future threats such as poaching. Today, Panna supports a self-sustaining tiger population of 88 individuals (including cubs) and represents one of India's strongest examples of successful ecological restoration.



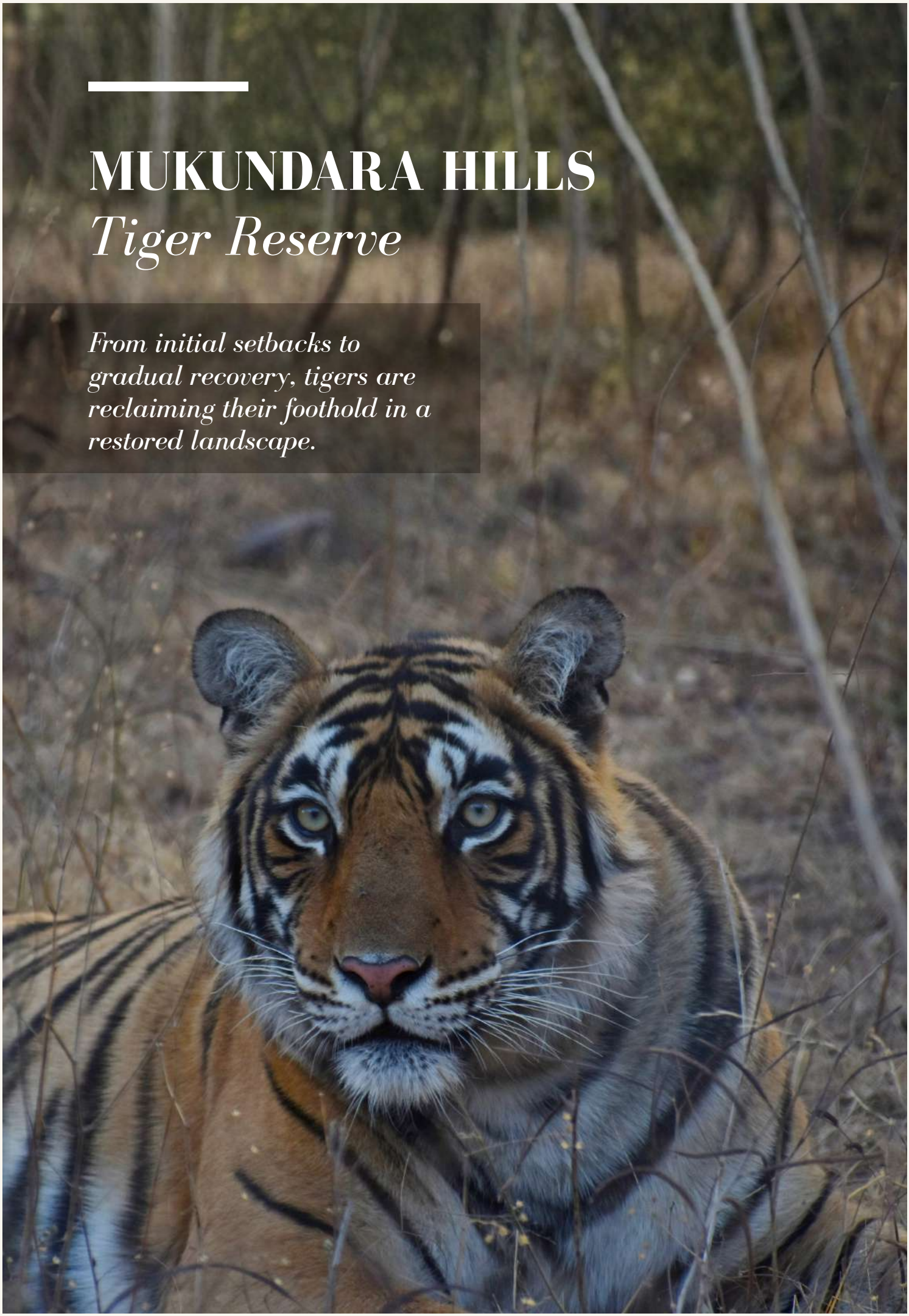
SANJAY DUBRI
Tiger Reserve

In the lost kingdom of India's last white tigers, proactive management and sustained conservation efforts are shaping a remarkable story of tiger recovery.



Sanjay Dubri Tiger Reserve represents an important example of tiger population recovery through supplementation of an existing population. Located in the eastern Madhya Pradesh landscape, the reserve forms an important part of the Central Indian tiger landscape and historically supported tiger populations including the famous white tigers. However, over time, habitat pressures, reduced connectivity and demographic challenges resulted in a decline in tiger numbers, leaving the population vulnerable and requiring conservation interventions to strengthen its long-term viability. The supplementation process was supported by the translocation of tigers from adjoining source populations. The first major contribution was in 2013, when a male tiger P-212 (SD002) from Panna Tiger Reserve translocated in Sanjay Dubri. During reintroduction, the existing tiger population was 8 as per the All India Tiger Estimation report. At present, the population reaches all time recorded high – 24 (as per the latest All India Tiger Estimation report 2022).

The recovery of Sanjay Dubri highlights the importance of active management and safeguarding the landscape connectivity. The availability of suitable habitat, prey base, protection measures and connectivity with surrounding tiger habitats allowed dispersing individuals to contribute to population recovery. The supplementation approach strengthened the existing population and enhanced its resilience, demonstrating the importance of maintaining functional tiger landscapes.



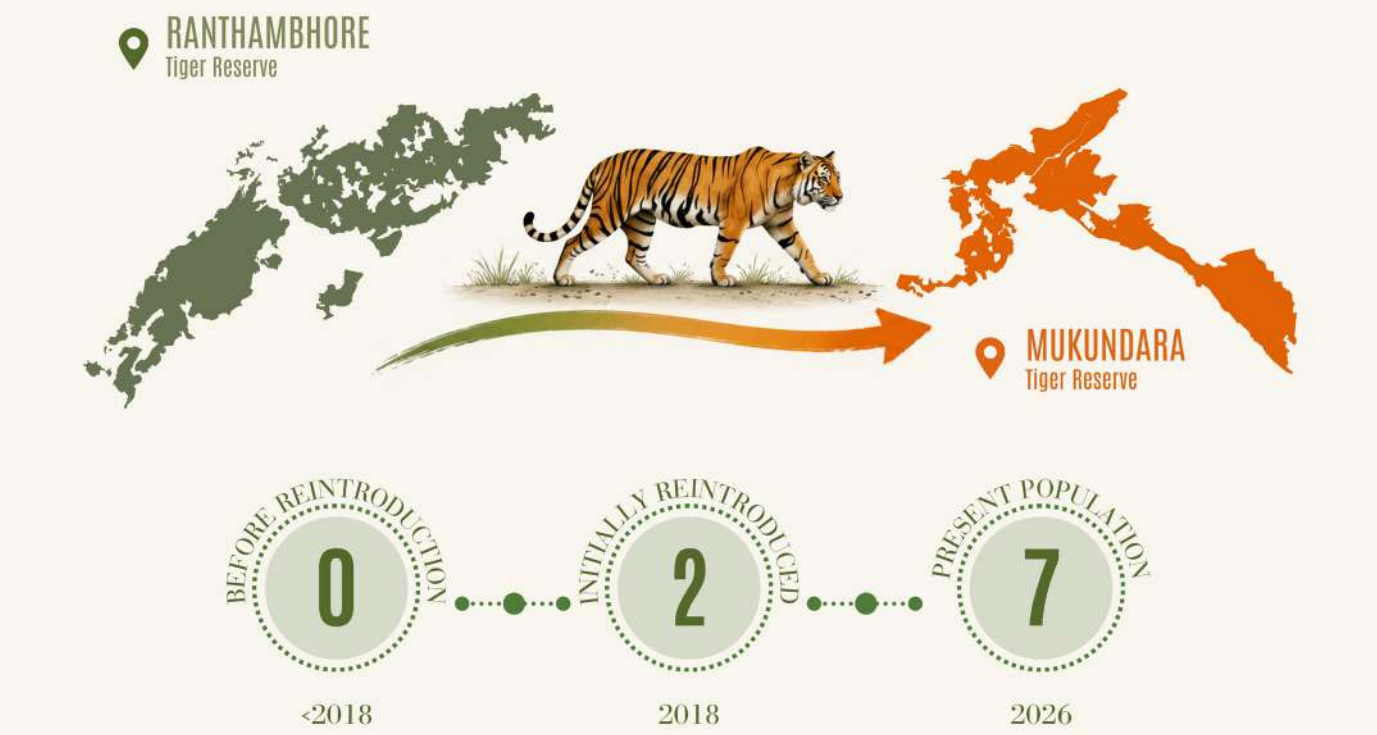
MUKUNDARA HILLS
Tiger Reserve

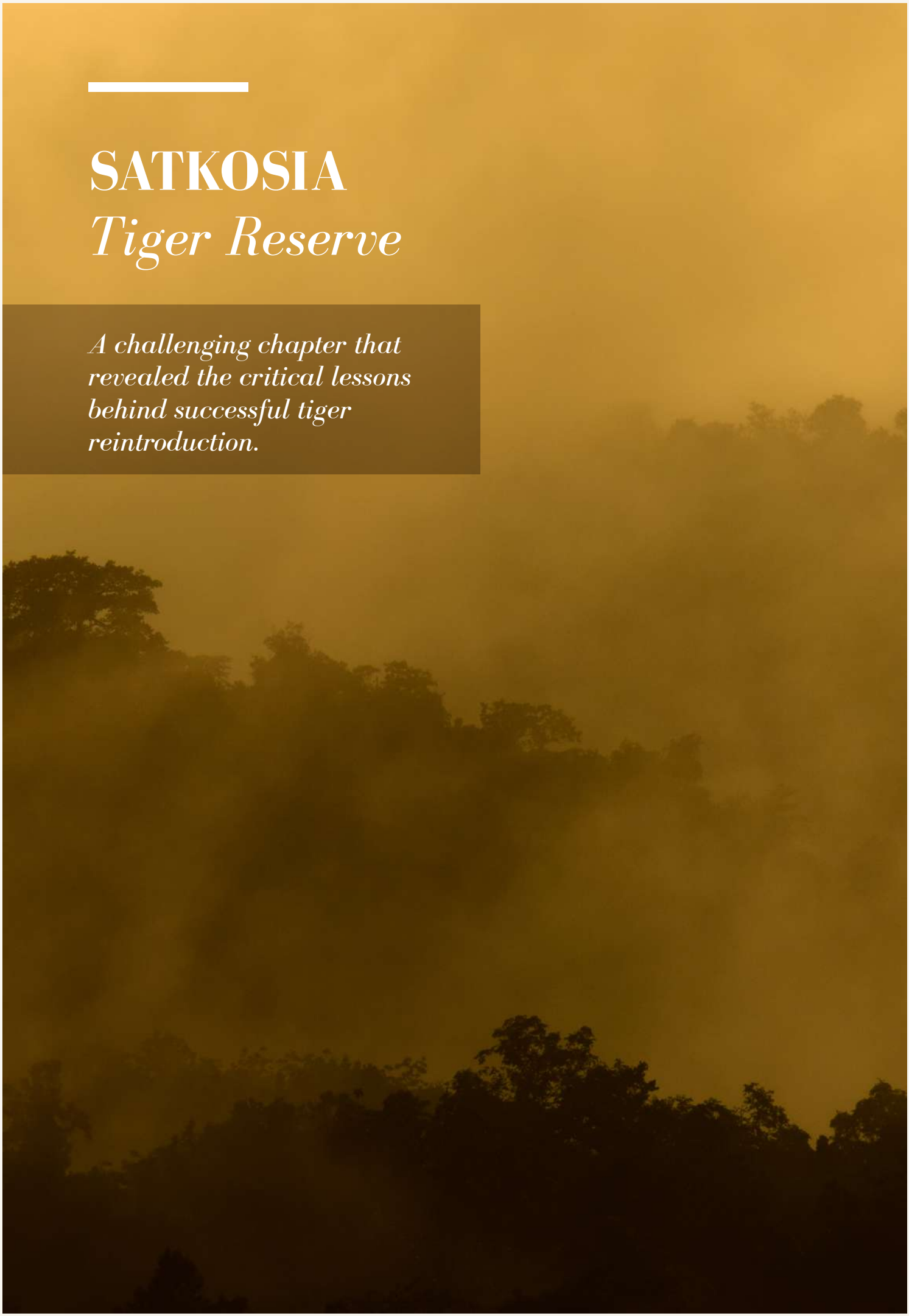
From initial setbacks to gradual recovery, tigers are reclaiming their foothold in a restored landscape.

Mukundara Hills Tiger Reserve represents a different category of tiger restoration. Unlike Sariska and Panna, where tigers had disappeared completely, Mukundara was a historically suitable tiger landscape where restoration was planned to establish a tiger population. Located in south-eastern Rajasthan, Mukundara forms an important ecological landscape. However, tiger numbers remained extremely low due to human pressures, isolation, shape of the tiger reserve and habitat-related challenges. The Rajasthan Forest Department initiated tiger translocation from Ranthambhore Tiger Reserve in 2018 with the objective of establishing a breeding tiger population in Mukundara. The programme was aimed at restoring ecological functionality and creating another important tiger population within Rajasthan.

They had erected an 82 km^2 enclosed area to keep the reintroduced tigers initially. The initial phase involved the movement of tigers and monitoring their adaptation to the new landscape. However, the establishment of a stable population faced challenges, including mortality events, limited breeding success, and the need for stronger habitat management. Mukundara represents the importance of population augmentation as a conservation tool. The objective was not simply to introduce tigers into an empty forest but to restore a population to a level where natural breeding and long-term persistence could occur.

The future success of Mukundara depends on improving habitat conditions, maintaining prey availability, ensuring protection, and strengthening landscape connectivity with other tiger populations of Rajasthan. Presently there are 7 tigers present in the Reserve. Shape of MHTR shall always limit the tiger recovery in the reserve.





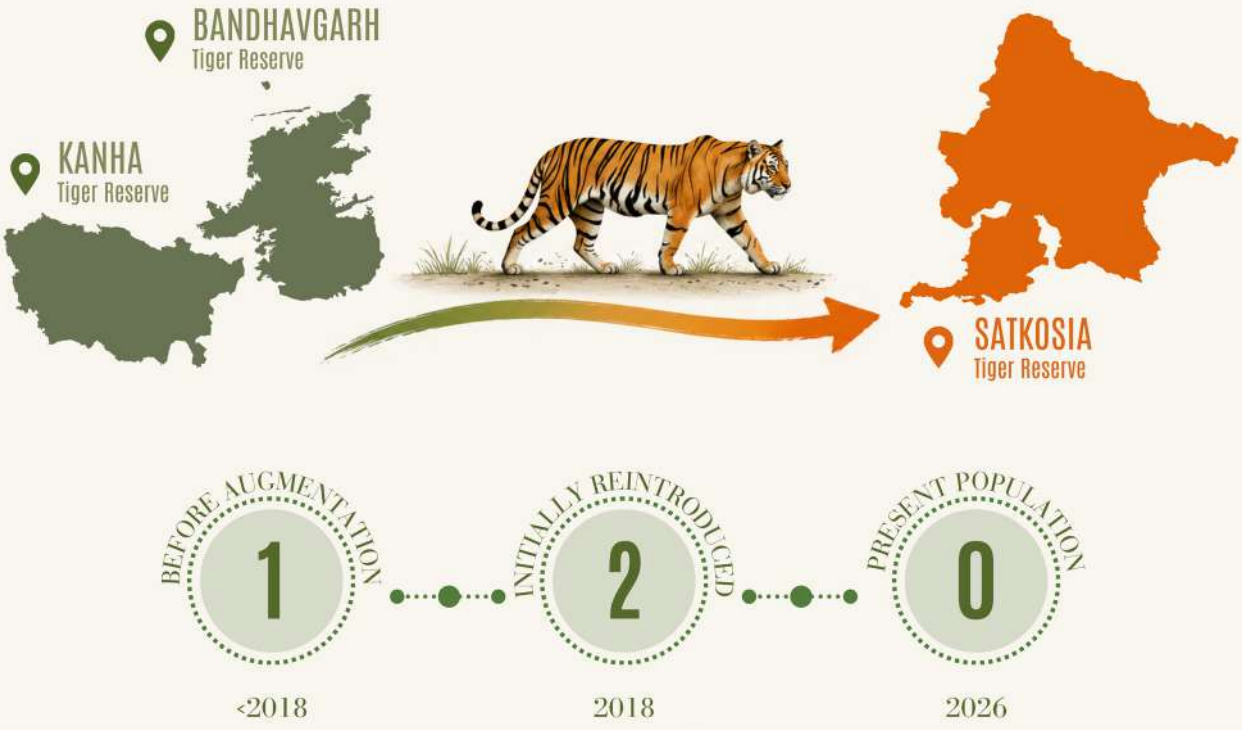
SATKOSIA
Tiger Reserve

A challenging chapter that revealed the critical lessons behind successful tiger reintroduction.

Satkosia Tiger Reserve represents one of the most important case studies highlighting the complexities and challenges associated with tiger restoration in India. Located in the Eastern Ghats landscape of Odisha, Satkosia was identified as a potential tiger recovery site due to its extensive forest cover, relatively large protected area, and historical presence of tigers. However, by the early 2000s, the tiger population had declined significantly due to habitat degradation, prey depletion, and anthropogenic pressures. To restore the population, the National Tiger Conservation Authority (NTCA) and the Odisha Forest Department initiated a tiger reintroduction programme in 2018, with the translocation of tigers from the source populations of Kanha Tiger Reserve and Pench Tiger Reserve in Madhya Pradesh.

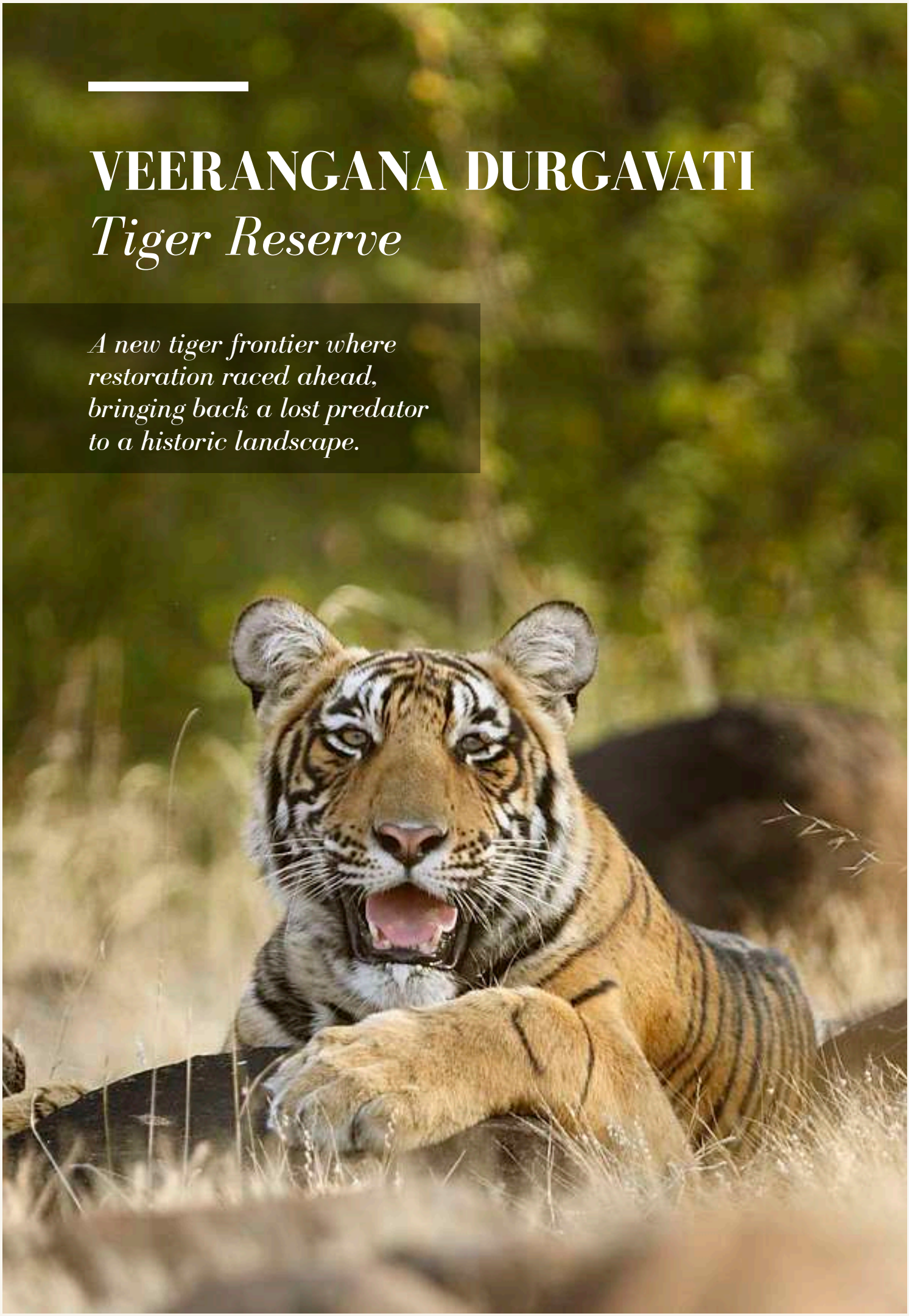
The programme aimed to establish a founder population and initiate natural breeding within the reserve. However, the restoration effort faced several challenges soon after the release of the relocated animals. The translocated tigers encountered difficulties in adapting to the new environment, and the landscape experienced considerable human–tiger conflict, including incidents of livestock depredation and negative local responses. One of the relocated tigresses remained in the landscape for an extended period, but the programme failed to achieve the establishment of a self-sustaining breeding population.

The Satkosia experience demonstrated that successful tiger restoration requires more than the availability of suitable forest habitat. A recipient landscape must possess adequate prey populations, secure and inviolate habitats, effective protection mechanisms, ecological connectivity, and social acceptance among local communities before initiating translocation. The failure of the programme did not indicate that tiger reintroduction is ineffective, but rather emphasized the importance of addressing the underlying factors responsible for population decline before attempting restoration. Satkosia therefore provides valuable lessons for future tiger recovery initiatives, highlighting that reintroduction should be viewed as a long-term ecological process requiring extensive preparation, adaptive management, and continuous monitoring rather than a single conservation intervention.



VEERANGANA DURGAVATI
Tiger Reserve

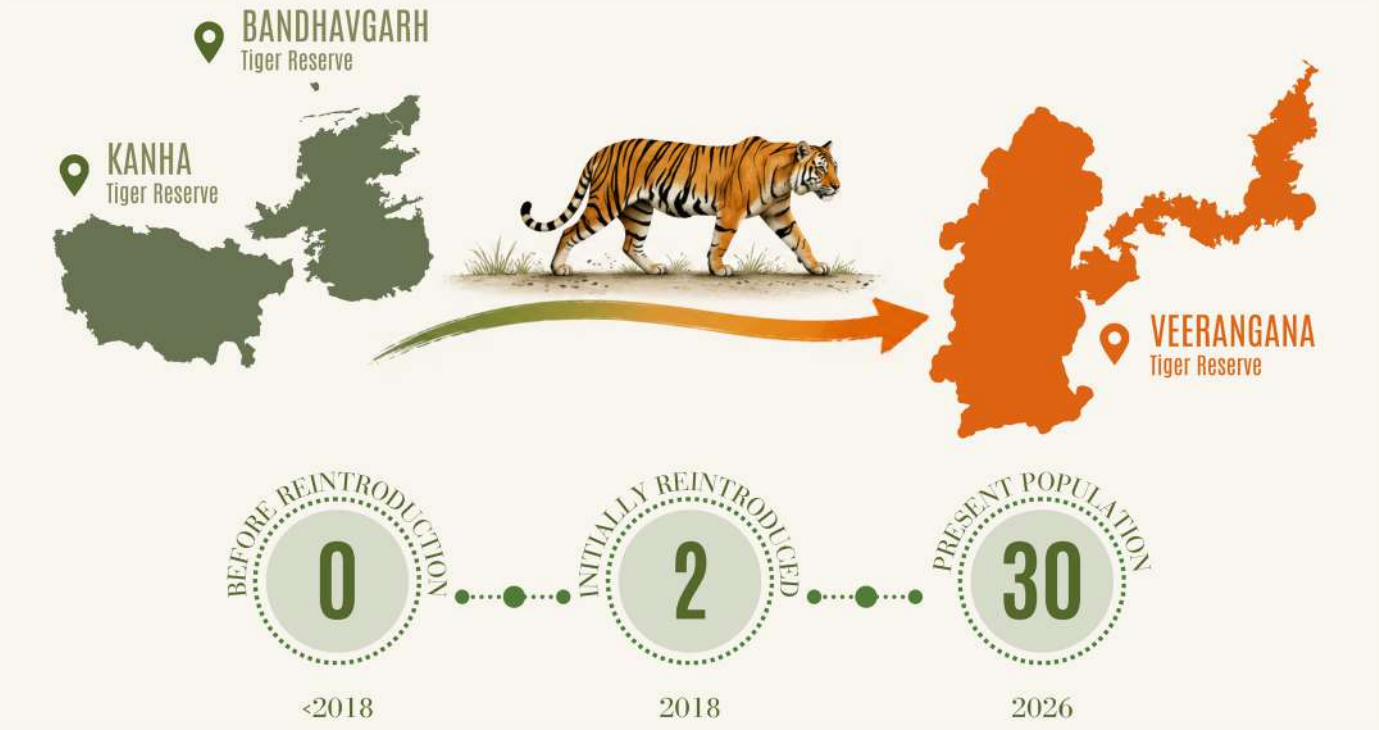
A new tiger frontier where restoration raced ahead, bringing back a lost predator to a historic landscape.

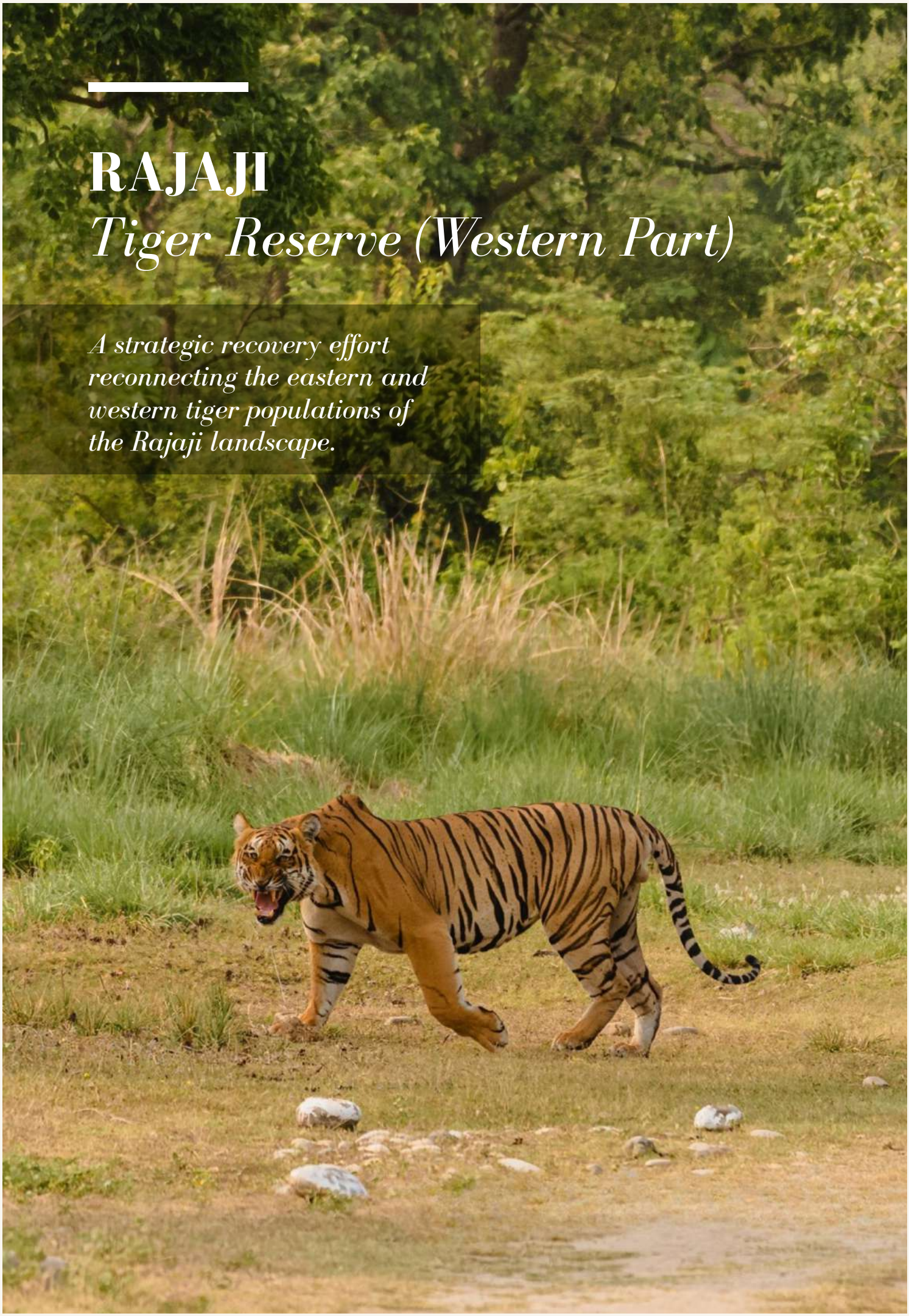


Veerangana Durgavati Tiger Reserve represents one of the most important potential landscapes for future tiger restoration in central India. Spread across a large forested landscape of Madhya Pradesh, the area has historically supported tiger presence but lost its resident breeding population due to habitat degradation, prey depletion, and increasing anthropogenic pressures. Its strategic location between existing tiger populations of central India makes it particularly important for strengthening landscape-level connectivity and expanding tiger distribution beyond currently occupied protected areas.

Nauradehi was identified as a potential cheetah relocation site under National Cheetah Recovery Planning due to its extensive habitat availability, relatively low human density in several forest patches, and potential to support a viable cheetah population. Restoration efforts were envisioned through the translocation of tigers from established source populations, with the objective of creating an additional breeding population in central India. The landscape gained further conservation importance with its designation as Veerangana Durgavati Tiger Reserve in 2023, reflecting its potential role in India's long-term tiger conservation strategy. Unlike traditional conservation approaches focused mainly on maintaining existing tiger populations, landscapes such as Veerangana Durgavati highlight the growing need to restore large forest areas capable of supporting additional tiger populations. As tiger numbers increase in source populations across central India, securing new habitats and establishing functional ecological linkages will become increasingly important to prevent population isolation and maintain long-term genetic and demographic stability.

The experience of Veerangana Durgavati demonstrates that tiger restoration is a landscape-level process rather than simply a species translocation exercise. The future success of tiger recovery in such areas will depend on creating suitable ecological conditions before reintroduction, ensuring long-term protection, restoring prey communities, and maintaining coexistence with local communities. This landscape therefore represents an important example of the shift in tiger conservation from protecting remnant populations toward actively restoring and expanding viable tiger habitats.



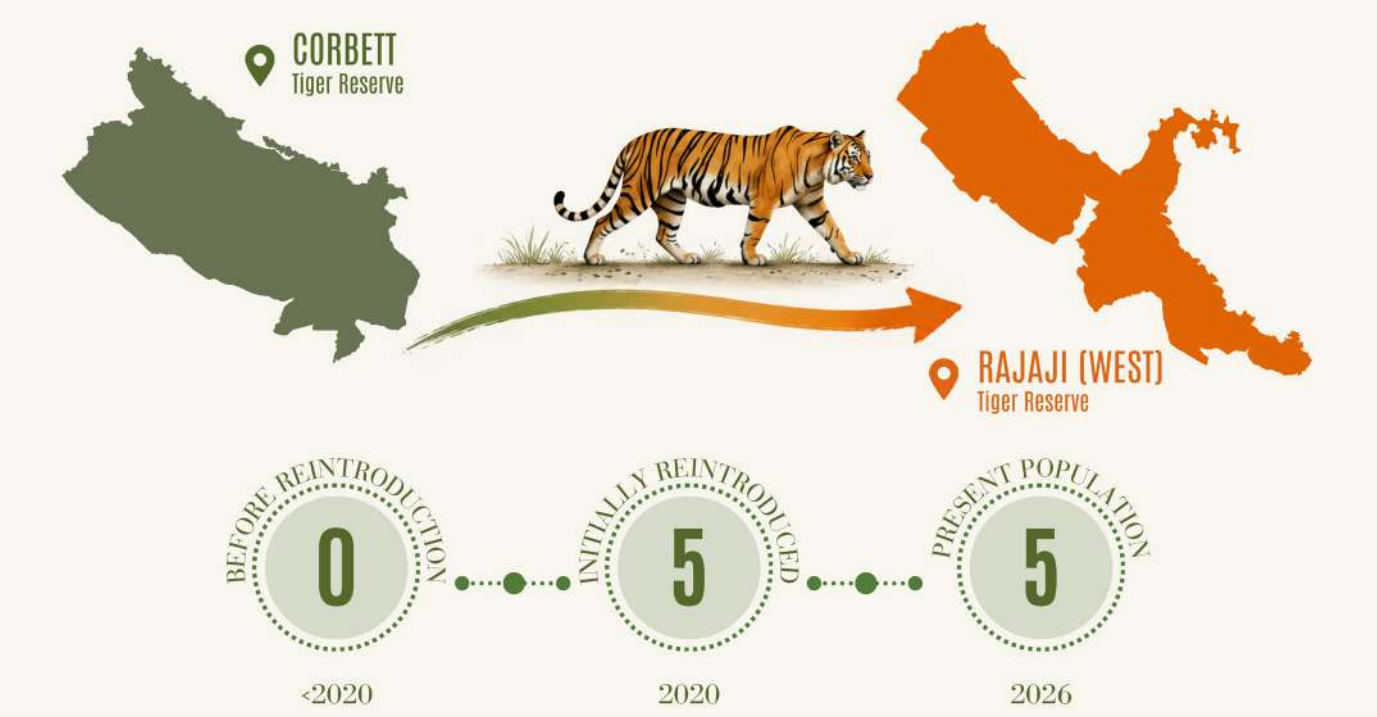


RAJAJI
Tiger Reserve (Western Part)

A strategic recovery effort reconnecting the eastern and western tiger populations of the Rajaji landscape.

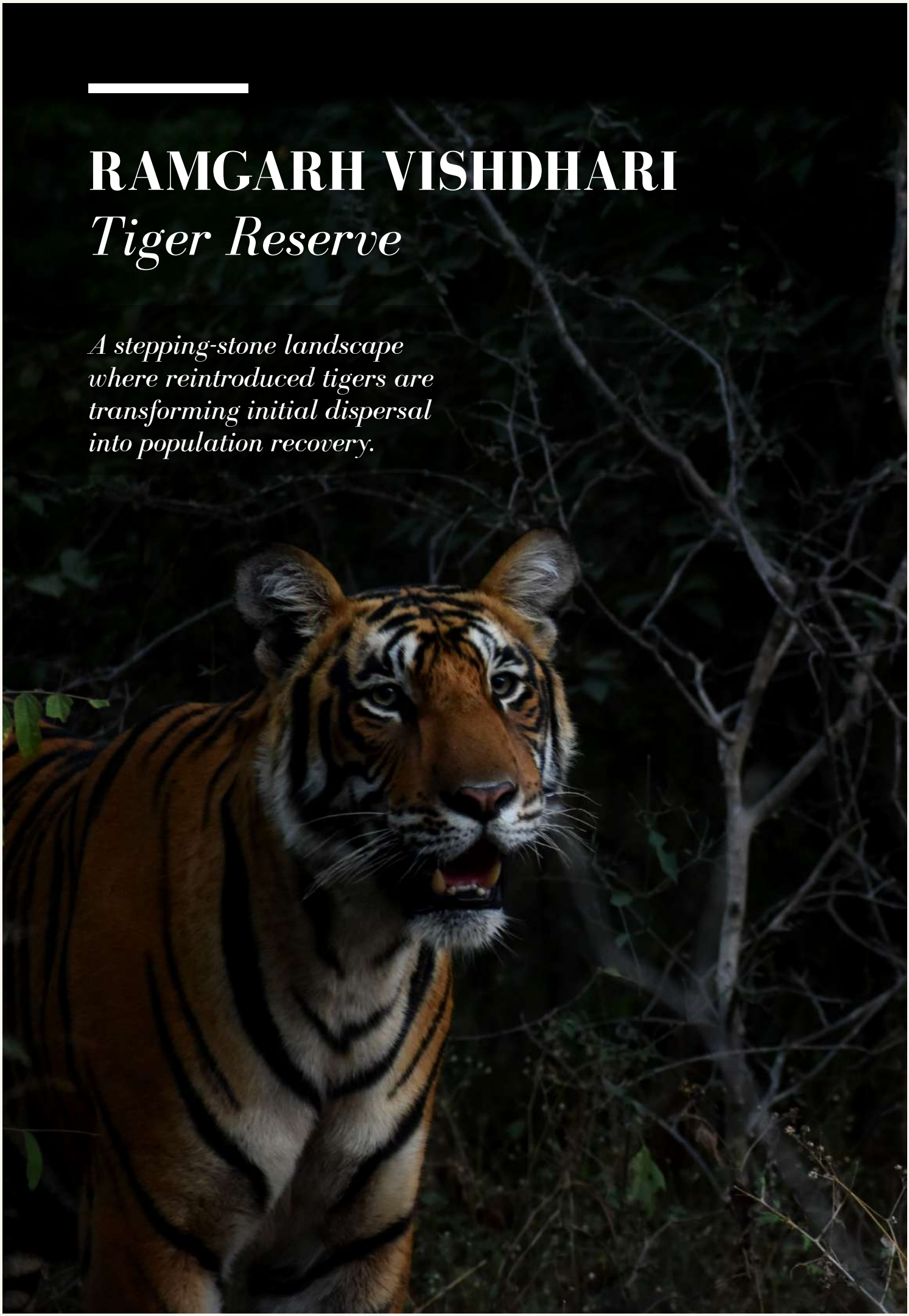
Rajaji Tiger Reserve represents an important example of tiger population augmentation within a historically occupied but fragmented landscape. Located in the Shivalik Hills and the western Terai landscape of Uttarakhand, the reserve forms a critical ecological link between the tiger habitats in the east and the west bank of river Ganges. Historically supporting tigers, the reserve experienced population decline due to habitat fragmentation, human pressures, and reduced connectivity. The western part of Rajaji became largely devoid of tigers, with only two resident tigresses reported, limiting natural recovery.

To strengthen the population, the Uttarakhand Forest Department initiated tiger augmentation through translocation of tigers from the Corbett landscape in 2020. The programme aimed to establish a breeding population and improve demographic stability in an area where natural re-colonisation was slow. Rajaji highlights the importance of supplementation in restoring isolated populations, while emphasizing the need for prey recovery, habitat connectivity, protection, and long-term monitoring for successful tiger recovery.



RAMGARH VISHDHARI
Tiger Reserve

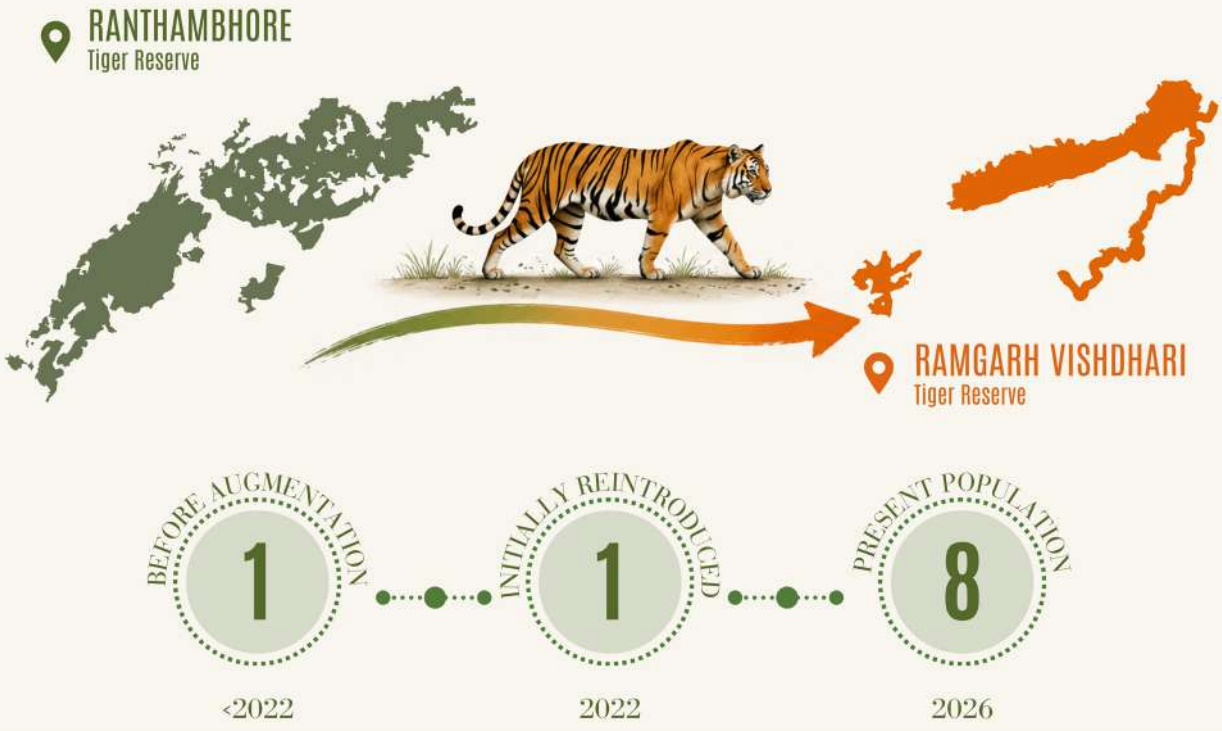
A stepping-stone landscape where reintroduced tigers are transforming initial dispersal into population recovery.

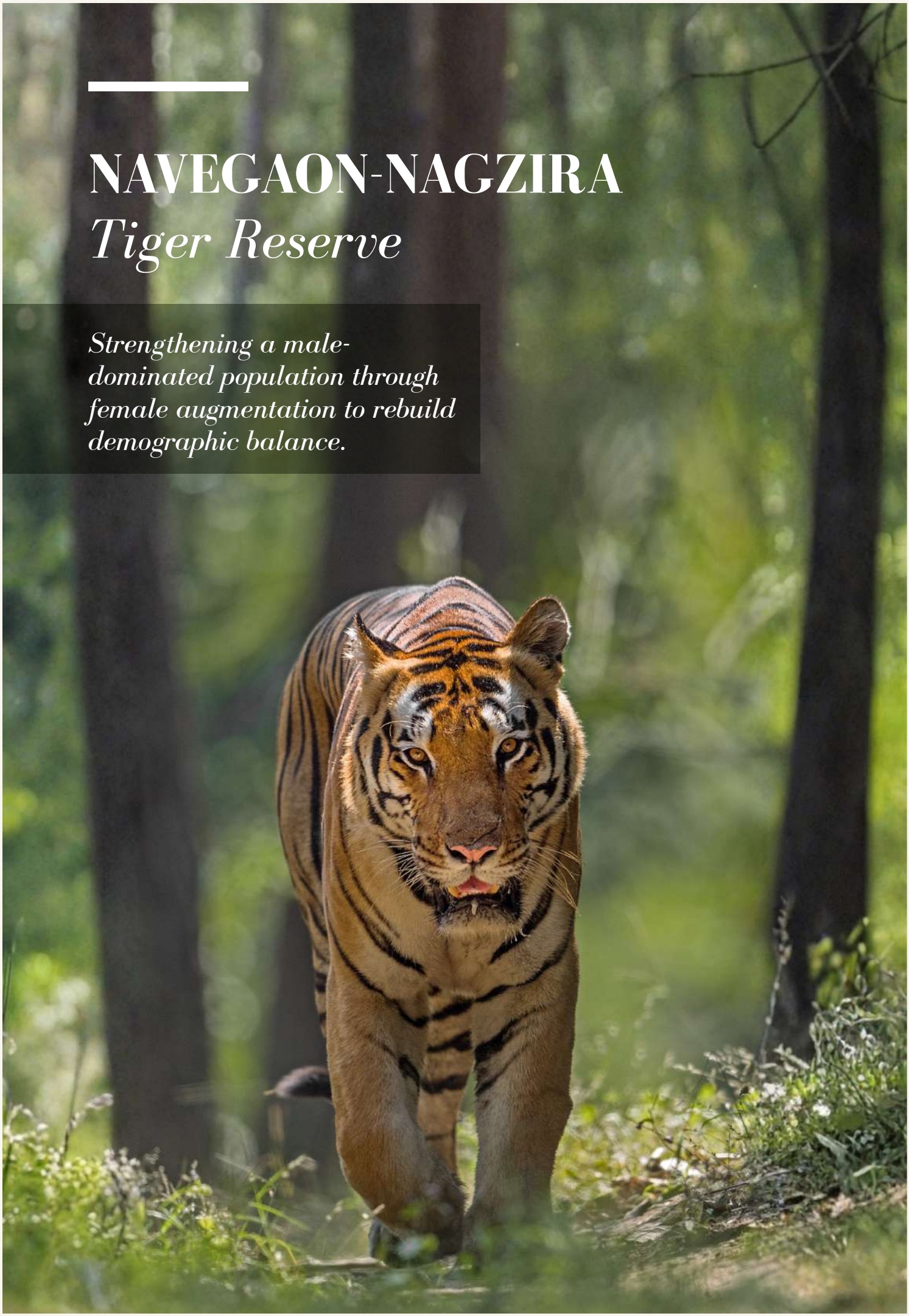


Ramgarh Vishdhari Tiger Reserve is an important component of the larger Ranthambhore Tiger Reserve (RTR) landscape and holds strategic conservation value due to its location between Ranthambhore and Mukundara Hills Tiger Reserve. Historically supporting tiger presence, the landscape experienced a decline in tiger occupancy due to habitat changes, human pressures, and reduced connectivity.

The declaration of Ramgarh Vishdhari as a tiger reserve provided an opportunity to strengthen tiger recovery within the greater RTR landscape. The objective was not a conventional reintroduction following complete extinction, but the establishment of a viable population through tiger supplementation and habitat restoration. Tigers from Ranthambhore were translocated to Ramgarh Vishdhari to initiate population recovery and enhance demographic stability.

The importance of Ramgarh Vishdhari extends beyond its individual tiger population, as it can function as a critical stepping-stone habitat within the eastern Rajasthan tiger landscape. By maintaining connectivity between Ranthambhore, Mukundara, and surrounding habitats, the reserve can contribute to the persistence of a larger tiger metapopulation structure through dispersal and genetic exchange. Long-term success will depend on breeding, prey recovery, habitat management, and maintaining functional landscape connectivity. Presently, Ramgarh is harbouring eight tiger individuals.





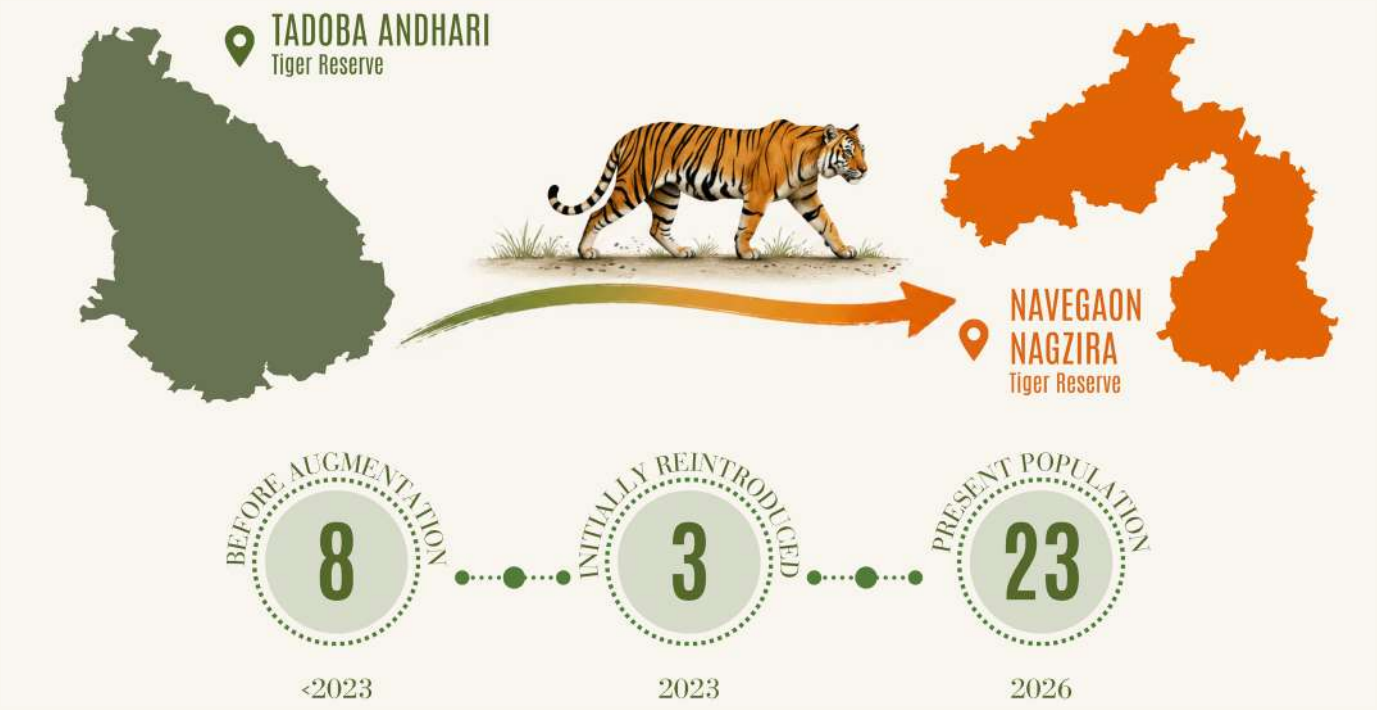
NAVEGAON-NAGZIRA
Tiger Reserve

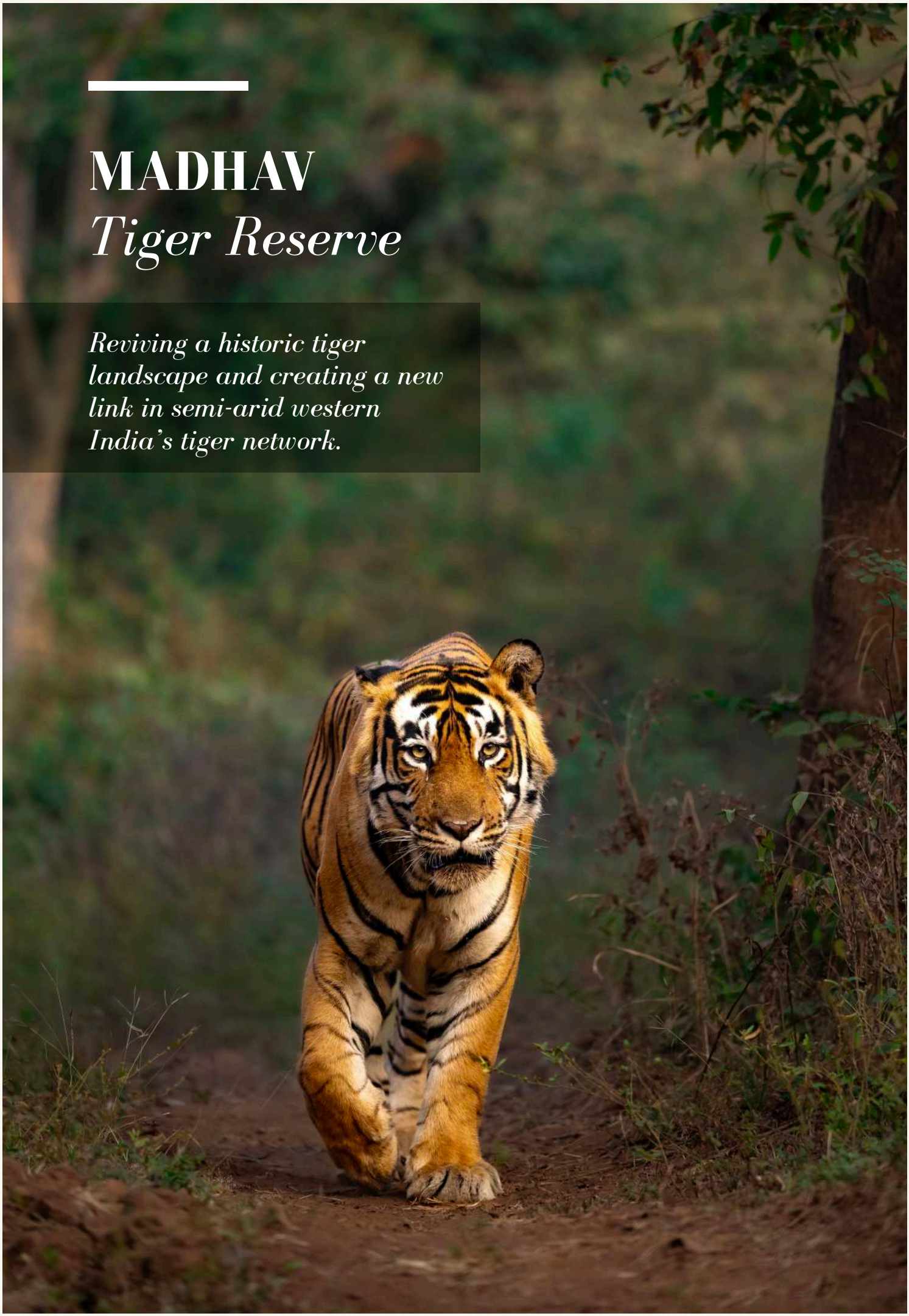
Strengthening a male-dominated population through female augmentation to rebuild demographic balance.

Navegaon–Nagzira Tiger Reserve represents tiger population augmentation rather than reintroduction after complete extinction. Located in eastern Maharashtra, the reserve forms an important part of the central Indian tiger landscape and is connected with larger tiger populations of the region. Historically, Navegaon–Nagzira supported tigers, but the population remained low compared to the ecological potential of the landscape. The objective of conservation interventions has been to strengthen the existing population and improve its demographic stability.

The restoration approach involves improving habitat quality, increasing prey availability, strengthening protection, and facilitating tiger movement from neighbouring populations. Unlike Sariska, where tigers had to be brought back after complete disappearance, the objective here is to increase an existing low-density population to a locally viable level.

Such augmentation programmes are important because many tiger landscapes in India still contain suitable habitats but have populations below their ecological potential. Increasing tiger numbers in these landscapes can contribute to maintaining connectivity and reducing isolation of populations.





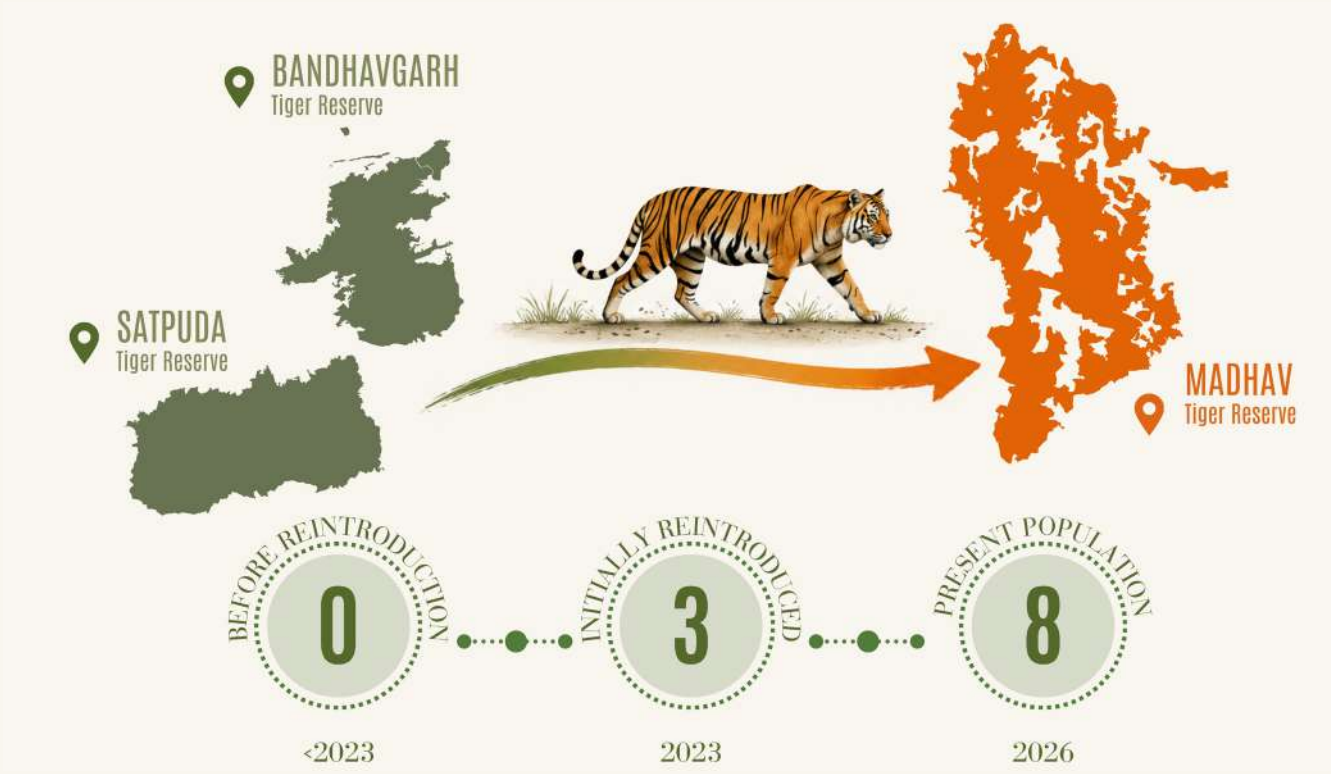
MADHAV
Tiger Reserve

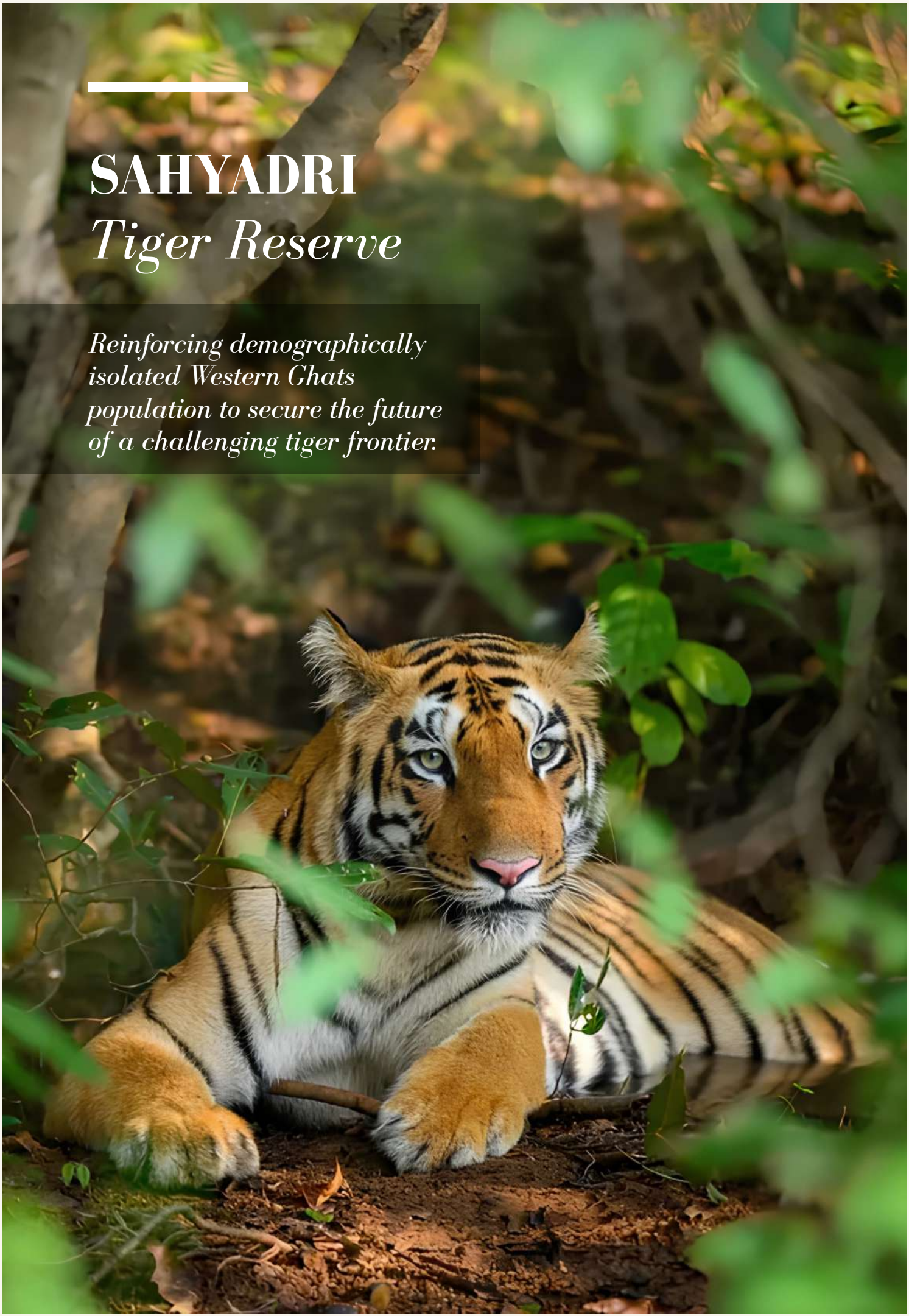
Reviving a historic tiger landscape and creating a new link in semi-arid western India's tiger network.

Madhav National Park represents one of the recent efforts to restore tiger presence in a historically important landscape. Located in northern Madhya Pradesh, the park was historically part of the tiger distribution range but lost regular tiger occupancy over time.

The restoration initiative aims to re-establish a tiger population through carefully planned translocation and habitat management. Madhav is strategically important because it can contribute to strengthening tiger connectivity in northern Madhya Pradesh. The programme represents the changing approach of Indian tiger conservation, where restoration is increasingly being considered at landscape scales rather than only within traditional tiger reserves.

As the initiative is recent, its success will depend on survival, breeding, habitat conditions, and long-term protection. Presently there are eight tigers in Madhav.





SAHYADRI
Tiger Reserve

Reinforcing demographically isolated Western Ghats population to secure the future of a challenging tiger frontier.

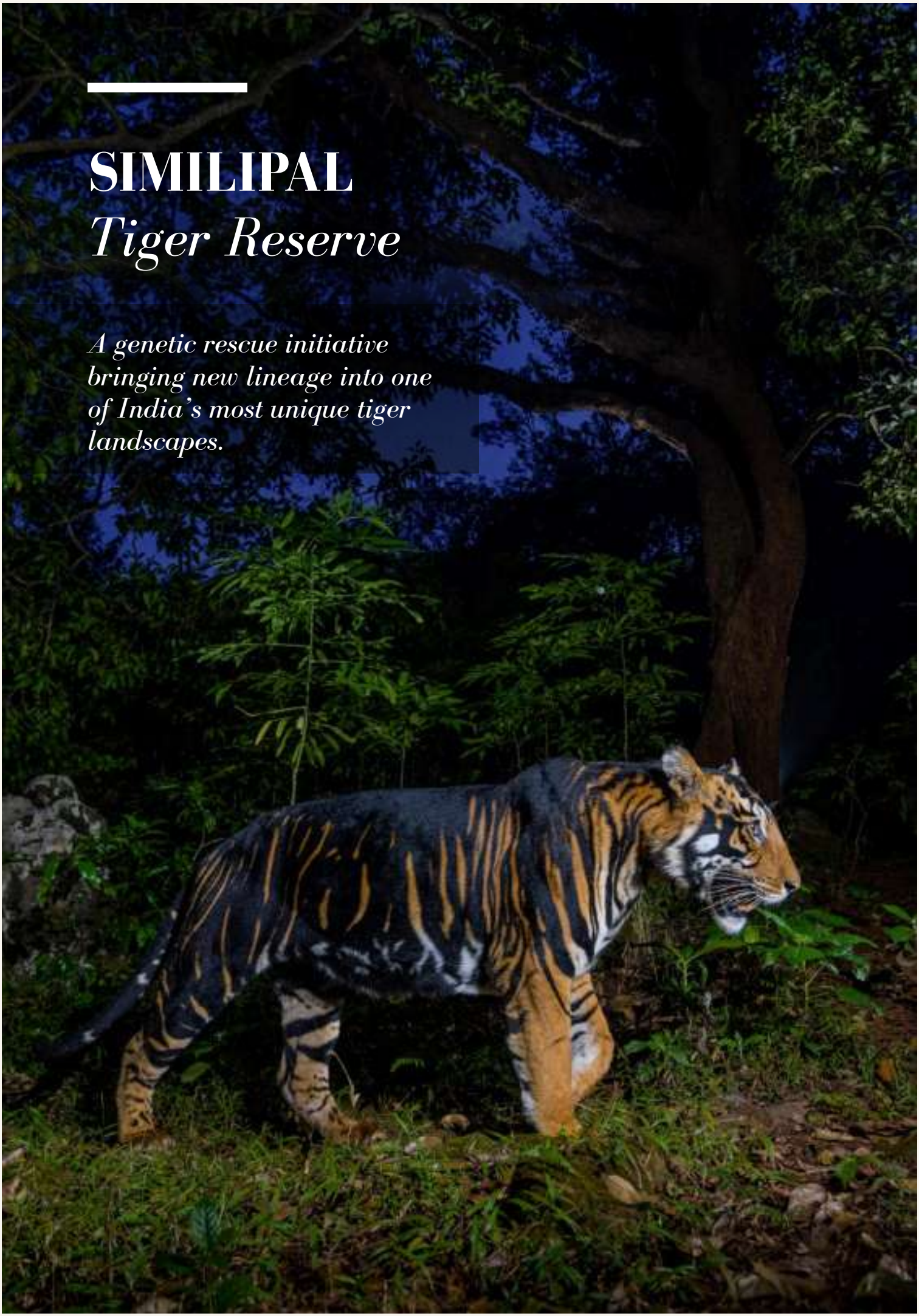
Sahyadri Tiger Reserve represents an important example of tiger population restoration in the Western Ghats landscape. The tiger population in this region forms part of the northern Western Ghats population block and shares ecological continuity with the Anshi–Dandeli landscape of Karnataka. The Western Ghats support unique biodiversity, but tiger populations in this region are fragmented due to habitat isolation, human pressures, and reduced connectivity. The restoration approach focuses on increasing tiger numbers, improving breeding potential, and reducing the risks associated with small isolated populations. Moreover, there are no suitable source tiger population present in the landscape which can repopulate the sinks.

Tiger augmentation in Sahyadri requires careful planning, selection of suitable individuals, post-release monitoring, and improvement of habitat conditions. Maintaining connectivity with neighbouring forest landscapes, particularly the Anshi–Dandeli region, is critical for enabling dispersal, genetic exchange, and long-term population viability.

Sahyadri highlights the importance of supporting tiger populations in landscapes where the species persists but requires demographic reinforcement to achieve ecological stability. At present Sahyadri harbours seven individual tigers.

SIMILIPAL
Tiger Reserve

A genetic rescue initiative bringing new lineage into one of India's most unique tiger landscapes.



Similipal Tiger Reserve in Odisha represents a unique case in India's tiger conservation history. Unlike classical tiger reintroduction programmes such as Sariska or Panna, where tigers were re-established after local extinction, Similipal retained a breeding population throughout. However, prolonged geographic isolation raised concerns regarding reduced genetic diversity, inbreeding risk, and the long-term viability of this population. In small and isolated populations, restricted movement of individuals can increase genetic drift, reduce genetic variation, and potentially lower the population's ability to adapt to environmental changes, emerging diseases, and other ecological pressures. Located in the Eastern Ghats landscape, Similipal supports a distinctive tiger population, including the well-known melanistic tigers, which represent a unique genetic characteristic of this isolated population.

To address concerns related to genetic isolation, Similipal has become an important example of genetic augmentation in tiger conservation. Under this initiative, genetically unrelated tigers were introduced from Tadoba-Andhari Tiger Reserve to supplement the existing Similipal population and increase genetic diversity. The translocation aimed to introduce new genetic variation into a small and isolated population while maintaining ecological continuity within the reserve. Unlike conventional reintroduction programmes focused on restoring extinct populations, this intervention represents a proactive approach aimed at strengthening an existing population by reducing risks associated with inbreeding and genetic erosion.

Similipal demonstrates an important shift in tiger conservation from focusing only on population recovery to maintaining population viability. A tiger population can persist numerically but still face hidden risks due to genetic isolation. The Similipal experience highlights that securing the future of tigers requires not only increasing numbers but also maintaining evolutionary processes that allow populations to remain healthy, adaptable, and resilient. Genetic rescue, when combined with habitat protection and landscape-level connectivity, provides an important conservation tool for safeguarding isolated tiger populations facing long-term genetic and demographic challenges.

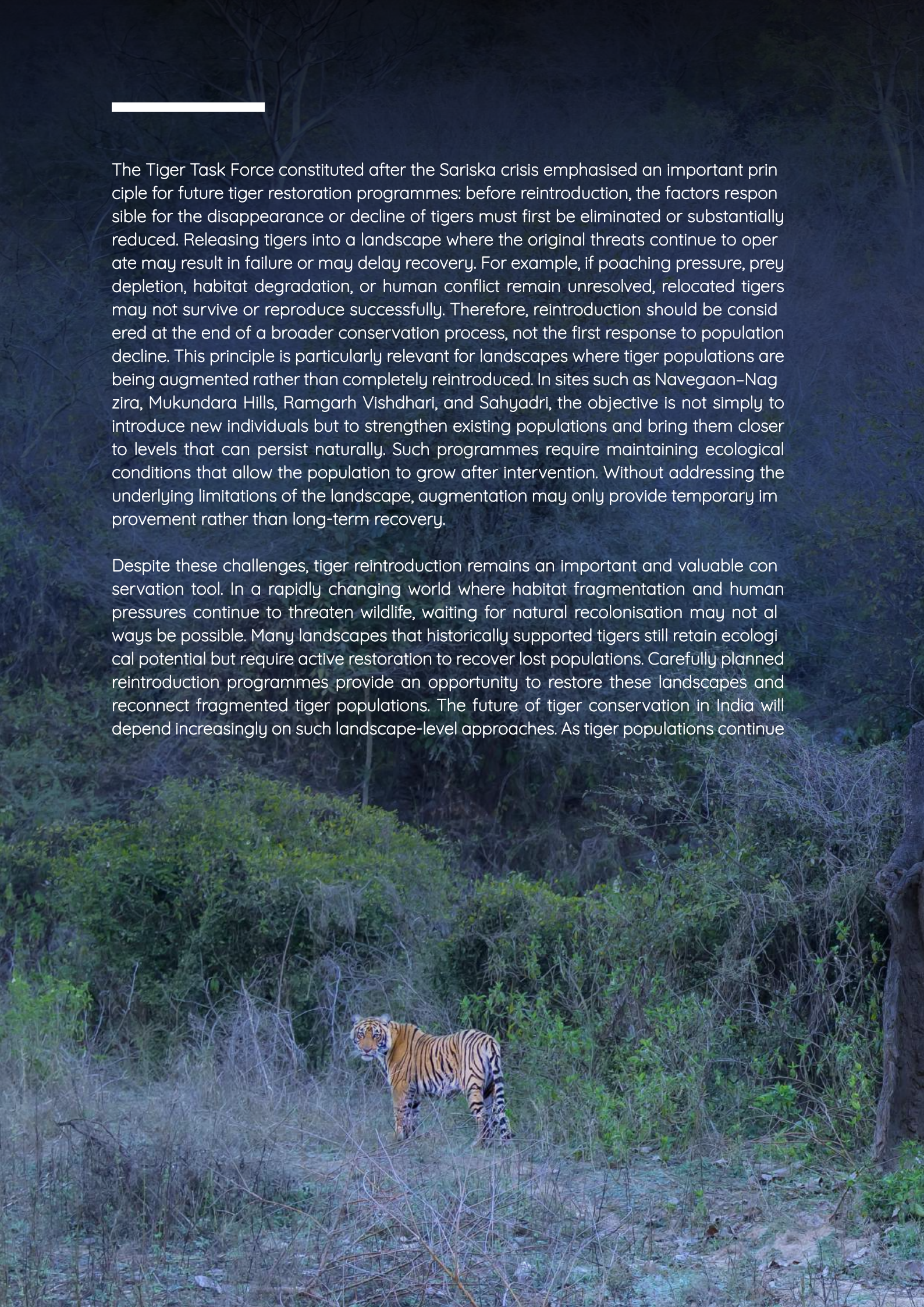
CONCLUSION

Tiger reintroduction and population restoration have emerged as important conservation strategies in India, particularly in landscapes where tiger populations have disappeared, declined severely, or become too small to remain viable in the long term. The experiences of Sariska, Panna, Mukundara Hills, Ramgarh Vishdhari, Navegaon–Nagzira, Satkosia, Sahyadri, and other landscapes demonstrate that restoring tiger populations is possible, but it is neither a simple nor an assured process. The history of tiger restoration in India clearly shows that translocating tigers is only one component of a much larger conservation process and should be used as the last resort. The reintroduction cannot be replacement for the landscape connectivity which allows healthy and fit individuals to traverse through the landscape and acts as a filter for weaker individuals. A tiger released into a landscape does not automatically translate into a successful population. The long-term establishment of a tiger population depends on multiple ecological and management factors, including suitable habitat, adequate prey availability, protection from poaching, landscape connectivity, and reduced human-induced pressures. Therefore, reintroduction should be considered as a landscape restoration intervention rather than merely an exercise of moving animals from one protected area to another.

The success of Sariska and Panna demonstrated the potential of reintroduction programmes when the causes responsible for population decline are addressed before the intervention. In both cases, the disappearance of tigers was not due to the complete loss of habitat suitability. Instead, factors such as poaching and inadequate protection were the major drivers of decline. Once these issues were recognised and management interventions were strengthened, reintroduced populations were able to establish and reproduce. However, not all tiger reintroduction attempts have produced similar outcomes. The global experience of carnivore reintroduction programmes also shows that restoration efforts can fail when ecological or social conditions are not adequately addressed before release. In India, the Satkosia tiger relocation programme represents an important example of the challenges associated with restoring tiger populations. Although tigers were introduced into a historically suitable landscape, the programme faced many difficulties. The failure of the programme highlights that the presence of forest habitat alone is insufficient for successful tiger recovery. Similarly, some restoration programmes may require a much longer period before achieving the desired outcome. Sariska, despite being considered a successful example today, did not experience immediate recovery after reintroduction. The population required years of intensive monitoring, protection, adaptive management, and habitat improvement before establishing a stable trajectory. This demonstrates that conservation success should not always be measured immediately after translocation; some ecological restoration processes require time before populations become self-sustaining.

The Tiger Task Force constituted after the Sariska crisis emphasised an important principle for future tiger restoration programmes: before reintroduction, the factors responsible for the disappearance or decline of tigers must first be eliminated or substantially reduced. Releasing tigers into a landscape where the original threats continue to operate may result in failure or may delay recovery. For example, if poaching pressure, prey depletion, habitat degradation, or human conflict remain unresolved, relocated tigers may not survive or reproduce successfully. Therefore, reintroduction should be considered at the end of a broader conservation process, not the first response to population decline. This principle is particularly relevant for landscapes where tiger populations are being augmented rather than completely reintroduced. In sites such as Navegaon–Nagzira, Mukundara Hills, Ramgarh Vishdhari, and Sahyadri, the objective is not simply to introduce new individuals but to strengthen existing populations and bring them closer to levels that can persist naturally. Such programmes require maintaining ecological conditions that allow the population to grow after intervention. Without addressing the underlying limitations of the landscape, augmentation may only provide temporary improvement rather than long-term recovery.

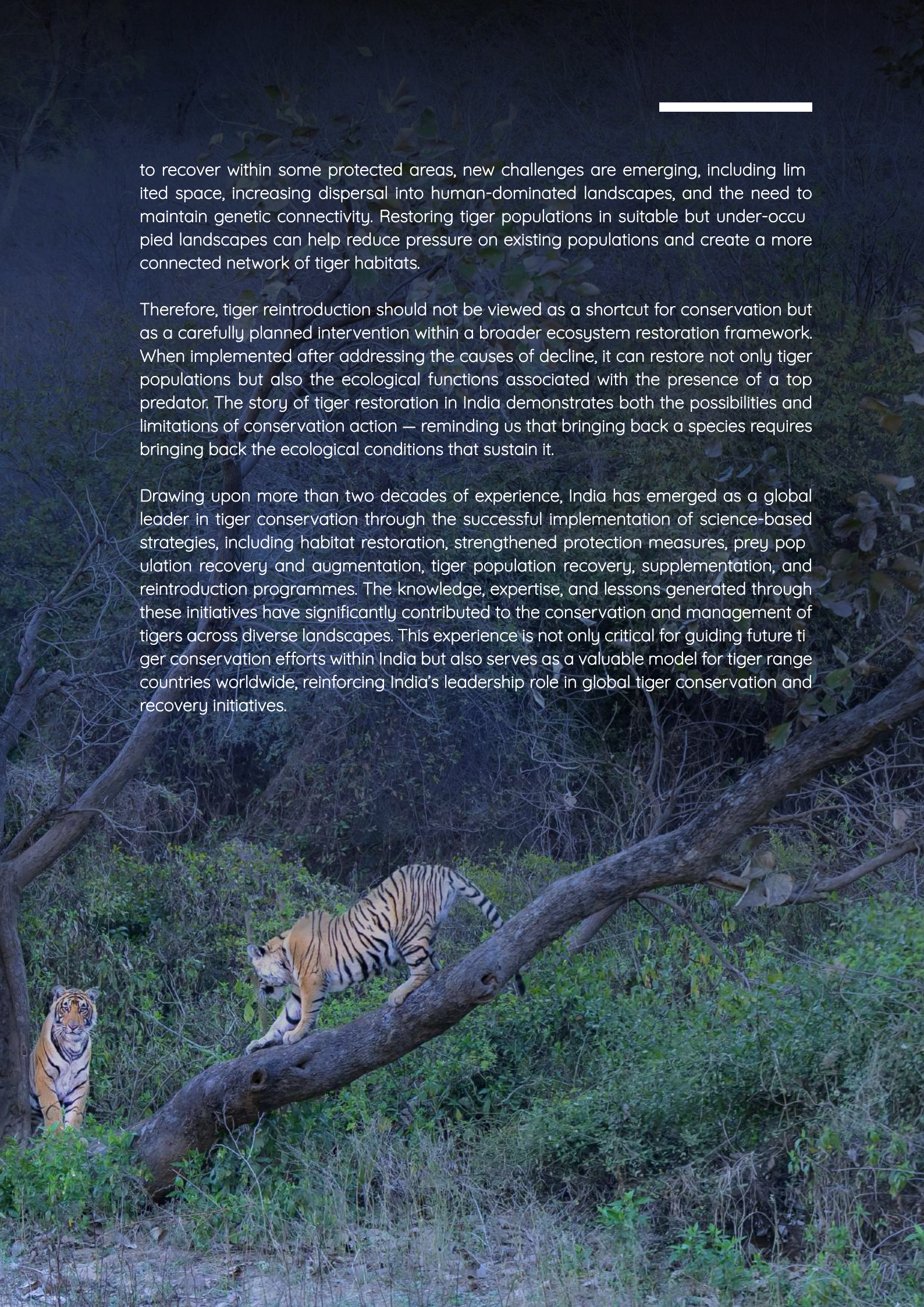
Despite these challenges, tiger reintroduction remains an important and valuable conservation tool. In a rapidly changing world where habitat fragmentation and human pressures continue to threaten wildlife, waiting for natural recolonisation may not always be possible. Many landscapes that historically supported tigers still retain ecological potential but require active restoration to recover lost populations. Carefully planned reintroduction programmes provide an opportunity to restore these landscapes and reconnect fragmented tiger populations. The future of tiger conservation in India will depend increasingly on such landscape-level approaches. As tiger populations continue



to recover within some protected areas, new challenges are emerging, including lim ited space, increasing dispersal into human-dominated landscapes, and the need to maintain genetic connectivity. Restoring tiger populations in suitable but under-occu pied landscapes can help reduce pressure on existing populations and create a more connected network of tiger habitats.

Therefore, tiger reintroduction should not be viewed as a shortcut for conservation but as a carefully planned intervention within a broader ecosystem restoration framework. When implemented after addressing the causes of decline, it can restore not only tiger populations but also the ecological functions associated with the presence of a top predator. The story of tiger restoration in India demonstrates both the possibilities and limitations of conservation action — reminding us that bringing back a species requires bringing back the ecological conditions that sustain it.

Drawing upon more than two decades of experience, India has emerged as a global leader in tiger conservation through the successful implementation of science-based strategies, including habitat restoration, strengthened protection measures, prey pop ulation recovery and augmentation, tiger population recovery, supplementation, and reintroduction programmes. The knowledge, expertise, and lessons generated through these initiatives have significantly contributed to the conservation and management of tigers across diverse landscapes. This experience is not only critical for guiding future ti ger conservation efforts within India but also serves as a valuable model for tiger range countries worldwide, reinforcing India's leadership role in global tiger conservation and recovery initiatives.



Across India's forests, the return of the tiger represents far more than the revival of a magnificent predator; it is a testament to the resilience of nature and the possibility of restoring landscapes where ecological processes can once again flourish. The challenge ahead is not simply to bring back the tiger, but to restore and safeguard the wild landscapes that sustain its existence and allow future generations to inherit a world where this iconic species continues to thrive.

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