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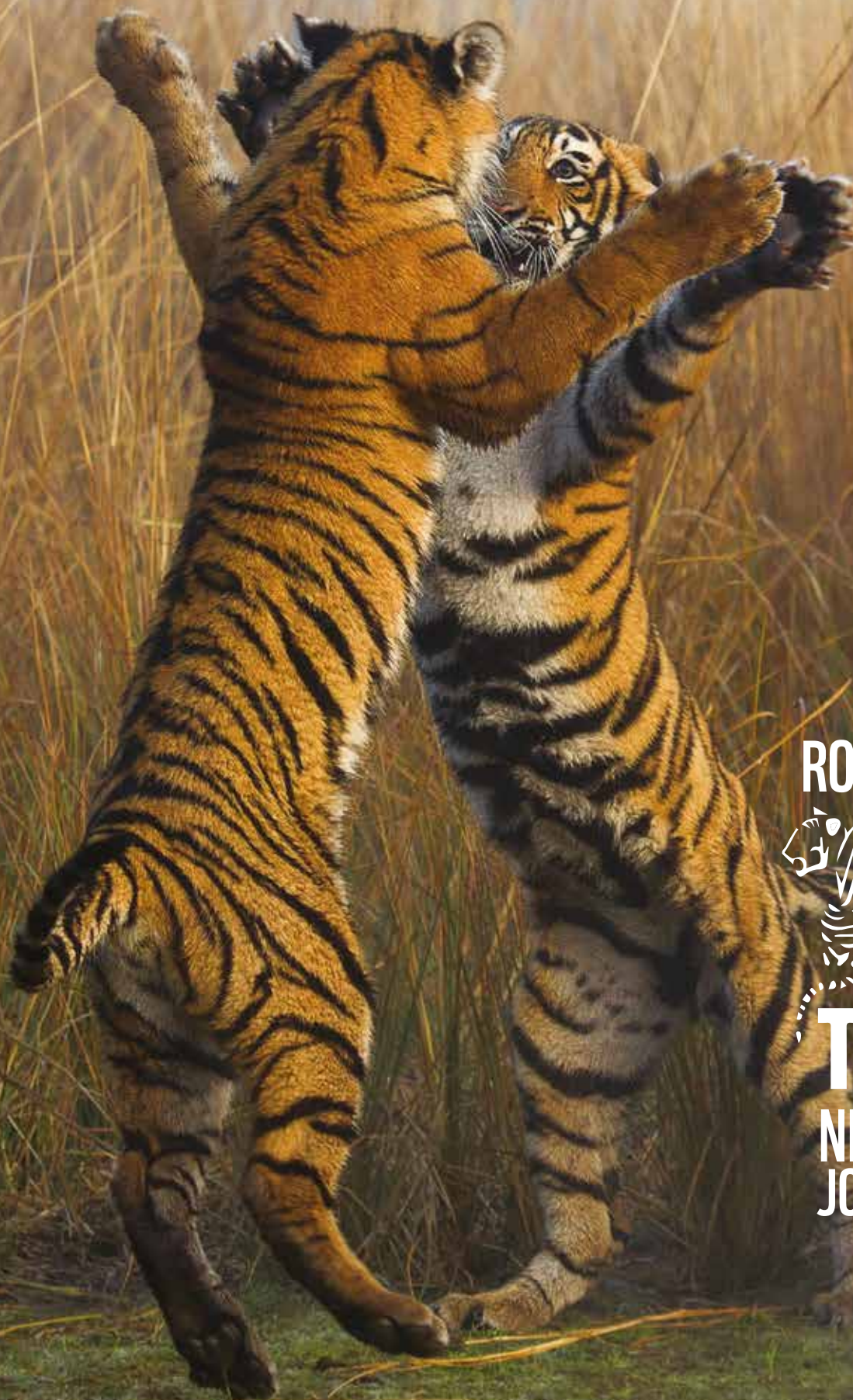
2019

**THE**



**FACTOR**





ROAD TO



**TX2**  
NEPAL'S  
JOURNEY



**ROAD TO**



**TX2**

**NEPAL'S  
JOURNEY**

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# MESSAGE COUNTRY REPRESENTATIVE



This Global Tiger Day is extra special to us, thanks to the recent tiger survey result that puts Nepal in the global TX2 map with the number of tigers in the country at 235. Beyond positioning Nepal on the path of becoming the first country to actualize the goal of doubling tiger populations by 2022, ‘The Year of the Tiger,’ this number also highlights that through sustained partnerships and unwavering resolve, critical interventions can be made to restore wildlife—even those that are teetering closely to the brink of extinction.

But arriving at this number has been far from easy; It would not have been possible without sustained efforts by committed people, organizations, and communities of all stripes. This book intends to shed light on this process, documenting Nepal’s journey in tiger conservation starting out 25 years ago leading to the inception of its landscape level approach – Terai Arc Landscape - based on the tiger dispersal model, to the current scenario of having almost doubled its tiger numbers. It also delves into the role of communities in conservation, the harnessing of technology in wildlife research and protection while also underscoring the challenge of illegal wildlife trade and infrastructure development on tiger conservation.

The role of families living in and around corridors and protected areas, community-based organizations, the people to prime minister approach, appropriate policy, along with institutional mechanisms and transboundary political commitment have been crucial factors in creating this enabling environment for tigers. The transboundary landscape approach with strong enforcement and community engagement has been critical in providing a contiguous habitat for tigers to thrive and, is in fact, one of the key reasons behind Nepal’s progress.

While these feats have served as sources of pride for the nation, we cannot ignore the challenges ahead of us—especially as Nepal maintains its rapid pace of development. Key issues including climate change adaptation, promoting sustainable green infrastructure, habitat management, and mitigating human wildlife conflict warrant significant priority. The illegal wildlife trade, fueled by a persistent demand, continues to serve as a major threat, fuelling transnational and organized crime. To dismantle the criminal nexus of demand and supply of tiger parts, transboundary and regional cooperation is critical.

Special thanks to the Government of Nepal, Ministry of Forests and Environment, provincial and local governments, Department of Forests and Soil Conservation, Department of National Parks and Wildlife Conservation, government line agencies—including the Nepal Army, Nepal Police, and Armed Police Force, for their committed leadership. We are also grateful to all our donors, WWF Network, and our partners, including NTNC, ZSL, and USAID, for all their support in advancing the conversation agenda.

As we continue to tread on this conservation journey and strive towards meeting and surpassing the TX2 goal by 2022, may we clinch more landmark victories and write encouraging stories that reflect the power of together possible.

A handwritten signature in black ink, appearing to read 'Ghana S. Gurung'.

Ghana S. Gurung, PhD  
Country Representative  
WWF Nepal



# PREFACE

As one of the few remaining focal landscapes for tiger conservation, Nepal's role in safeguarding tigers, the area they occupy, and the communities they intersect with cannot be overstated. Since our inception in May 1993, WWF Nepal has held a frontier position in supporting the Government of Nepal's mission to prioritize tiger conservation. Almost 26 years, countless secured victories, and plenty of challenges later, our utmost commitment and resolve towards ensuring the survival of these apex predators has only progressed.

This publication intends to showcase the stories behind the many steps we have taken in this continued endeavor—working alongside our main partners, the Government of Nepal, community-based organizations, conservationists, and donors. The first of which dates back to 1972 with WWF's launching of the region's very first tiger-focused project, the Tiger Ecology Project in Chitwan. The joint venture between the Government of Nepal, WWF US, and the Smithsonian Institute played a key role in bringing the conservation of the tiger (*Panthera tigris tigris*), their prey base and critical habitats onto the national agenda.

In the early 2000's, further ground was gained when the Government of Nepal, with support from WWF Nepal, adopted the country's first landscape level conservation approach through the establishment of the Terai Arc Landscape (TAL). Setting an exemplary standard in conservation by starting from a species-centric approach and leading to a landscape-level approach, TAL provided a critical avenue to ensure the long-term survival of long-ranging species like tigers, rhinos, and elephants.

To ensure tiger recovery and persistence in the landscape, conservation initiatives factored key ecological concerns, such as habitat and prey base and in doing so, recognized the importance of corridors for the dispersal of tigers facilitating gene flow. Based on the success of TAL, Nepal has created four additional conservation landscapes to represent critical ecosystems at various altitudinal gradients. Among other benefits, the landscape approach has strengthened trans-border cooperation and enhanced joint efforts to minimize wildlife crime.

Supplementing the landscape-level approach, technological interventions have revolutionized our modalities to monitor

tigers and other wildlife across the national parks, bottlenecks, and corridors. Under the leadership of the Government, WWF Nepal, with support received from WWF US, has collaborated with the National Trust for Nature Conservation to monitor tiger populations using self-triggering camera traps in Bardia National Park. This marked the first time camera traps were used in wildlife monitoring in Nepal.

Persisting threats, especially poaching, continue to serve as one of the major challenges in tiger conservation. Realizing the gravity of the issue, WWF Nepal established its Wildlife Trade Monitoring Program in 2006. Working in close coordination with policy makers, enforcement agencies, local communities, and the international community, WWF Nepal plays a proactive role in supporting the government in curbing poaching and illegal wildlife trade to conserve Nepal's iconic species.

Beyond historical challenges, we have also adjusted our efforts to the changing development context in anticipation of prospective future threats. In response to increasing infrastructural developments in the country, WWF Nepal continues to advocate for environmental and wildlife friendly innovation with appropriate smart green mitigation measures in place to encourage best practices across the region.

While the conservation context, solution, and strategy may have changed throughout this journey, one priority has been unwavering: the well-being of communities living within our working landscapes. By promoting positive links with tiger populations and harnessing local capacities in the conservation effort through community involvement, further momentum has been achieved.

From 121 wild tigers in 2009 to almost 235 tigers in 2018, Nepal's commitment to double its tiger population by 2022 is attaining reality. At this very moment, we rejoice these conservation successes, acknowledging the leadership of the Government of Nepal in integrated conservation and development with close partnership with the Ministry of Forest and Environment and its Departments, Nepal Army, Nepal Police, Armed Police Force, community-based organizations, youth, academic institutions, conservation partners in Nepal and our supporters from abroad. 🐾

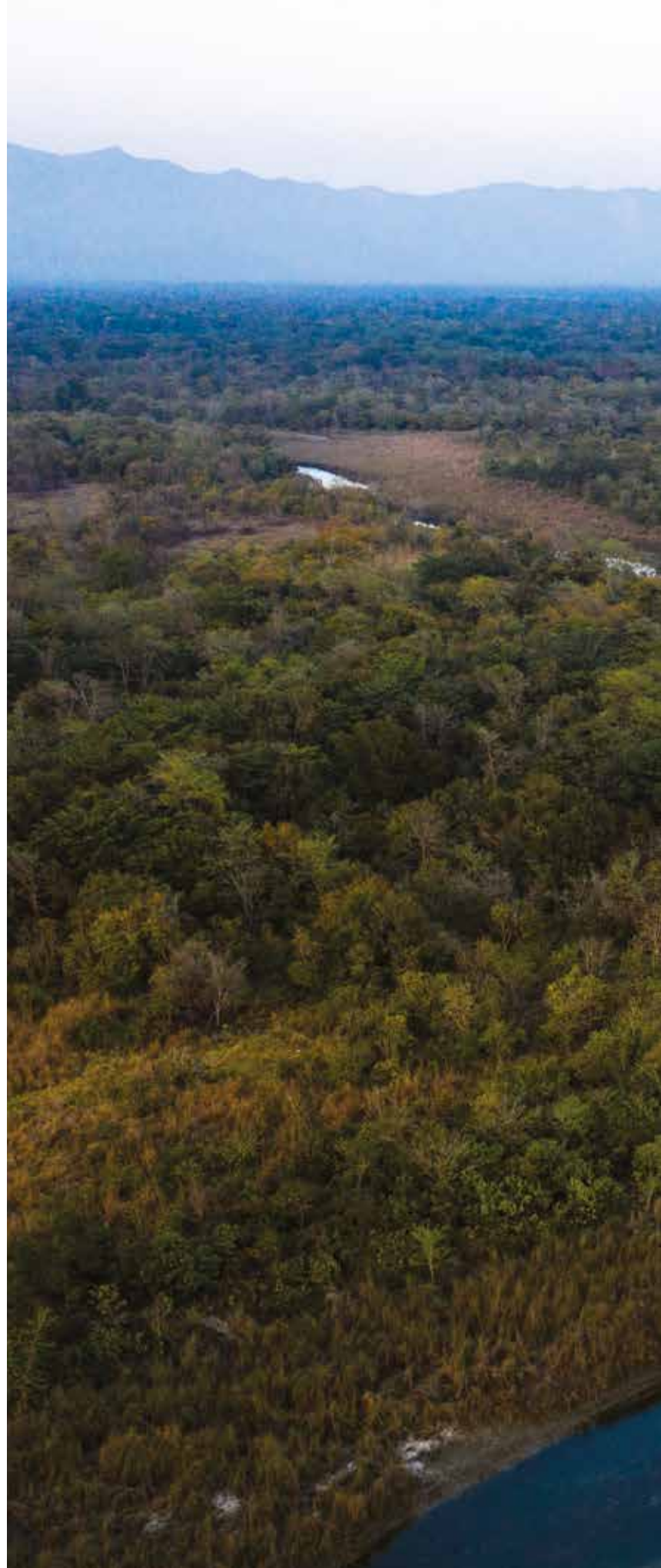




**CONSERVING  
THE TIGER  
HEARTLANDS**  
**THE TERAI ARC LANDSCAPE**  
Kanchan Thapa

# CONSERVING THE TIGER HEARTLANDS : THE TERAJ ARC LANDSCAPE

The last 300 years have seen drastic changes in land-use patterns triggered primarily by the agricultural revolution, with government conducive policies resulting in the transformation of large expanses of forests into agricultural land. While the forests of Terai in Nepal are a prime habitat for tigers, these regions remain threatened due to habitat loss and fragmentation resulting from large-scale human migration from the mid-hills to the Terai lowlands, and consequent infrastructure development. As such, large mammals including the tiger and the greater one-horned rhinoceros have been relegated to the confines of protected areas and its surrounding regions.



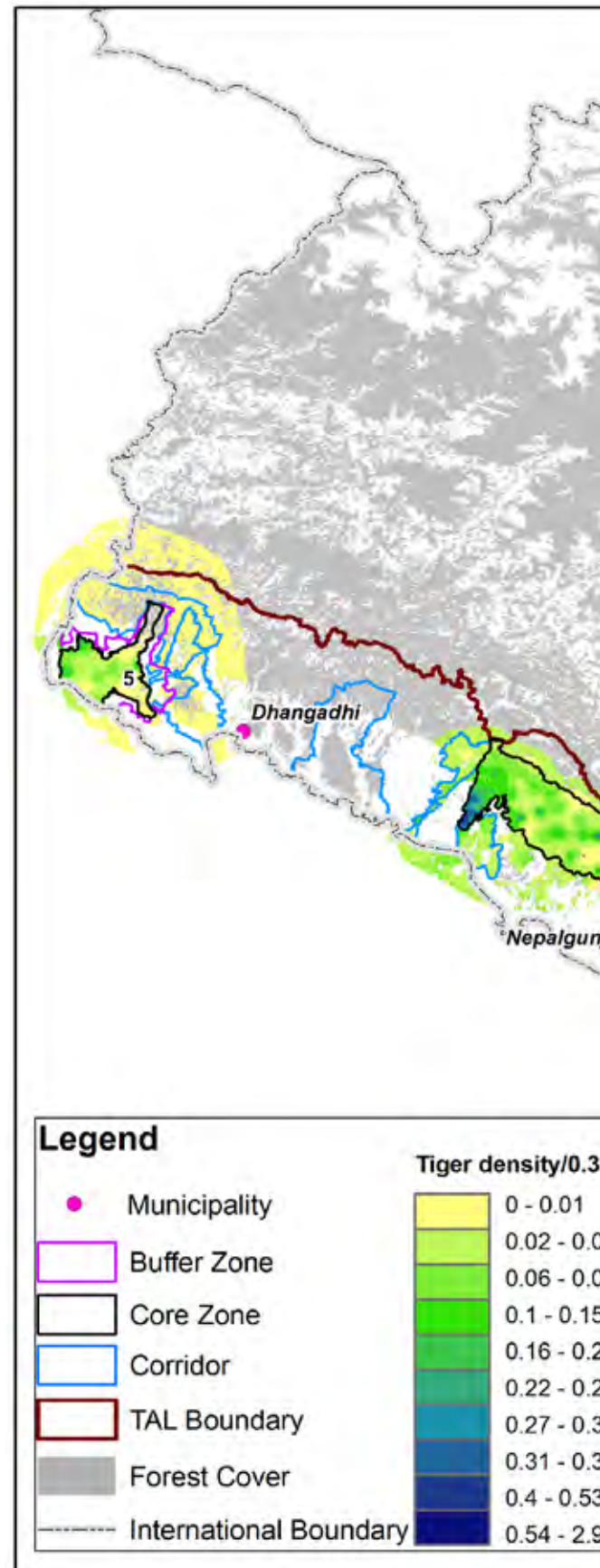


Such changes in land use patterns have posed major challenges to the management and maintenance of ecologically, demographically, and genetically viable populations of endangered species such as tigers in the landscape. Tiger is an apex species indicative of a healthy ecosystem, and their dispersal ability facilitates gene flow across tiger habitats thereby improving genetic diversity within a space. Corridors are integral to landscapes for easy dispersal of tigers between impeding populations. Given the ecological characteristics of the species and potential adversities from habitat fragmentation, it was realized that conservation interventions within protected areas alone would not be enough to increase the probability of their existence in the long run. The Terai Arc Landscape was consequently born based on a growing realization of the need for large contiguous habitats for effective tiger conservation.

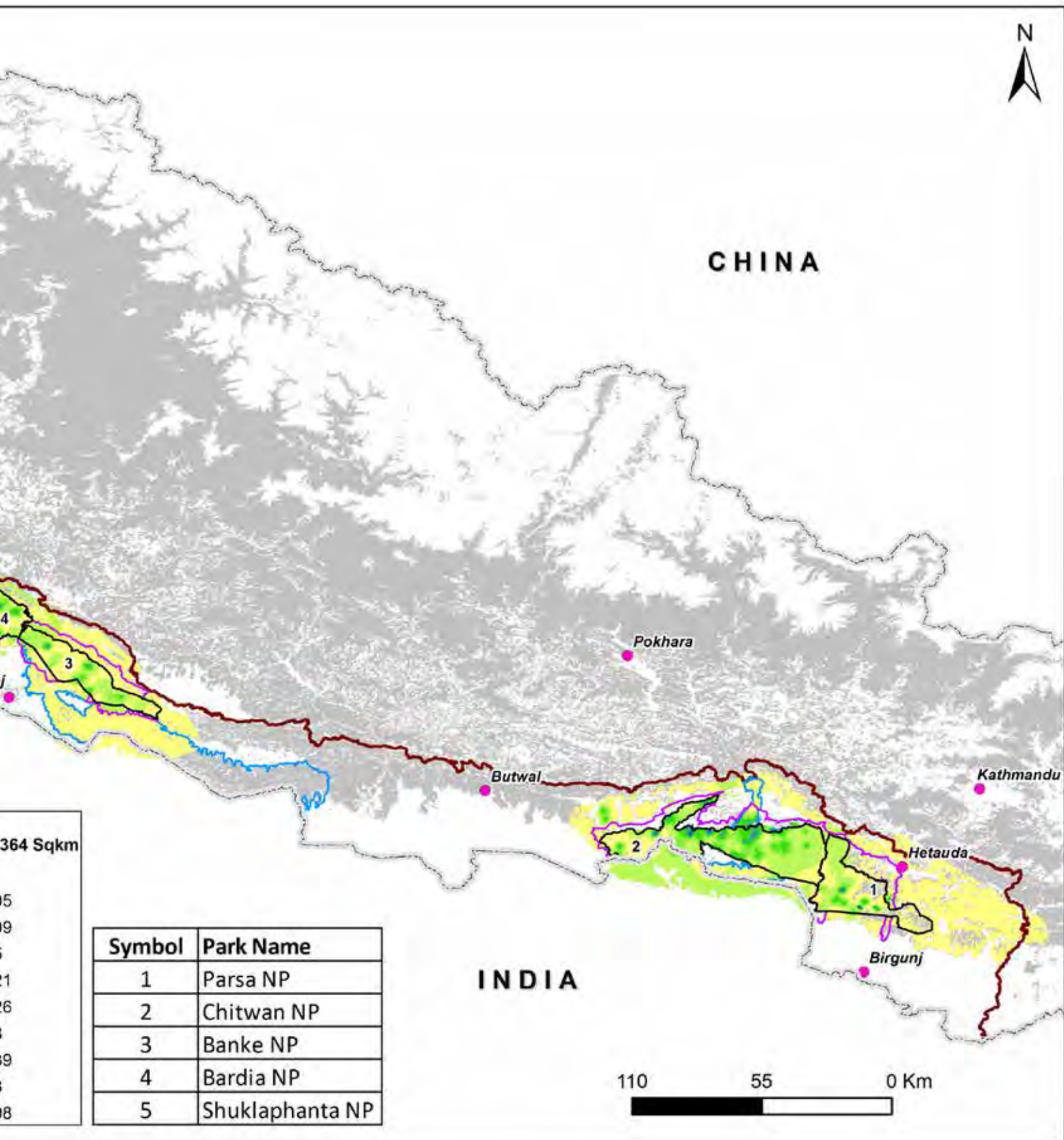
## BIRTH OF THE TERAI ARC LANDSCAPE

Given the successes of landscape level conservation approaches in Brazil, South America (Amazon Region Protected Areas: ARPA), a team of scientists headed by Dr. Eric Dinerstein, designed the Terai Arc Landscape (TAL) between 1998-2001, basing it primarily on the tiger dispersal model. Developed based on 30 years of tiger data collected from various parts of the landscape; with protected areas treated as the source population, the tiger dispersal model aimed at increasing probability of existence based on their dispersal over a larger landscape from the initial source populations (protected areas).

A trans-boundary landscape, extending from Nepal's Bagmati River in the east to India's Yamuna River in the west, TAL covers a vast area of 24,710 sq. km in Nepal with a network of six protected areas, forests, agricultural lands and wetlands. This was the first conservation landscape in Nepal, supporting one of the most spectacular assemblages of large mammals in Asia such as the Bengal tiger and the greater one-horned rhinoceros. A key characteristic of TAL is the presence of seven corridors and three bottlenecks; conceptualized to facilitate connectivity for wildlife between protected areas on either side of this transboundary landscape while engaging local communities in forest restoration and management programs with the aim of protecting biodiversity.







## TRANSBOUNDARY TIES

The Terai Arc Landscape was endorsed by the government of Nepal in 2001 for a globally unique landscape where biodiversity is conserved, ecological integrity is safeguarded, and the socioeconomic well-being of the people is secured in a dynamic environment of land, water, and resource use. To achieve this overarching goal, conservation strategy consequently focused on enhancing local stewardship; a key ingredient in a landscape dominated by 6.7 million people. This conservation strategy subsequently brought together a coalition of governmental and non-governmental partners from Nepal and India to connect fifteen protected areas across the Himalayan foothills with habitat linkages to facilitate species dispersal and seasonal movements.

The first 10-year TAL Strategy and Implementation Plan (2004-2014) was aimed at making TAL ecologically viable, adopting tiger conservation as a tool and addressing urgent conservation management issues and tackling priority threats such as poaching and habitat fragmentation. Meanwhile, the second ten-year strategy endorsed in 2016, aimed at integrating contemporary issues such as climate change and large infrastructure development into the conservation agenda.

## TRANSBOUNDARY TIGERS

In a nutshell, the Terai Arc Landscape has adopted an integrated conservation approach that incorporates meta population management while benefiting local people, nature and wildlife. In the last 18 years since its inception, significant progress has been made, ranging from corridor restoration, reducing threats to species, and safeguarding livelihoods, to effective transboundary cooperation between Nepal and India.

Corridor functionality as measured by tiger dispersal is evident in a majority of identified corridors in the landscape. This functionality has triggered the importance of corridor connectivity, contributing towards the persistence of tigers in the landscape. Meanwhile, moderate tiger genetic diversity estimated at 61% highlights the success of restoration efforts in corridor connectivity.

The population recovery of tigers within protected and surrounding areas is indicative of the effectiveness of Nepal's landscape level conservation strategy, the design for which has further been scaled across other conservation landscapes such as the Sacred Himalayan Landscape and Chitwan Annapurna Landscape in Nepal. Additionally, the 94% increase in tiger populations (against a baseline of 121 tigers in 2009), with 68% of the potential habitat used by tigers is also indicative of this functionality of corridors. This only goes to showcase that the meta population management concept adopted through the inception of Terai Arc Landscape is becoming a reality. 🐾





# THE KHATA STORY

One of the last remaining strips of forests facilitating transboundary connectivity for wildlife, Khata is a significant biological corridor connecting Nepal's Bardia National Park to India's Katarniaghat Wildlife Sanctuary to form the larger transboundary Terai Arc Landscape.

Initially a barren and degraded patch of land resultant of anthropogenic pressures, eighteen years on, the forests of Khata are now lush and green with empirical evidence on the increased movement of megafauna such as tigers, rhinos and elephants. The corridor has since proven to be biologically functional, with recent surveys indicating the presence of over 34 tigers utilizing this forest patch to roam around the two rich transboundary protected areas.

Over the years, the Khata corridor has become a testament to the impacts that effective conservation efforts and diligent community engagement can have. The Corridor and Bottleneck Restoration Project under the Terai Arc Landscape Program has played a major role in restoring the ecological functionality of the corridor and in ensuring that ecosystem services are in place. However, challenges such as human-wildlife conflict and land use change; brought about by development of linear infrastructure, still loom large. Proper mitigative and prevention measures thus become imperative to keep intact the conservation successes achieved over the years that have benefitted the place, its people and nature at large.





# THE HUMAN TOUCH

Sheren Shrestha, Smriti Dahal, Tara P Gnyawali



## THE HUMAN TOUCH

In 2018, Nepal announced its latest tiger population estimate of 235 individuals, bringing the country close to doubling its population from the estimated 121 individuals in 2009, nearly achieving the global commitment made in the 2010 St. Petersburg Summit in Russia. Many factors facilitated this increase; among the most important was the country's community-based conservation approach - extensively involving communities living in and around tiger habitats.







Globally, conservation practices have evolved to increasingly recognize the stewardship of local communities in conservation for sustainability. In a developing country like Nepal, reliance on natural resources for sustenance and livelihood, makes this approach even more critical. Successful conservation and increasing tiger numbers in the country are outcomes of prioritizing the well-being of these communities to safeguard tigers and other wildlife.

## RIGHT TO RESOURCES

The process of engaging communities in conservation has not been without its share of challenges. With communities living around tiger habitats heavily dependent on forest resources, conservation was initially perceived as a threat. Meanwhile, agriculture, livestock grazing, extraction of forest products, and other anthropogenic activities that had detrimental impacts on natural habitats, were associated with survival of local communities. Chronic issues such as these, including inadequate awareness and limited livelihood opportunities, therefore had to be addressed to ensure the success of conservation initiatives.

In 2001, the Government of Nepal assisted by WWF Nepal launched the Terai Arc Landscape (TAL) – Nepal program to holistically address diverse challenges to facilitate landscape conservation. The program consequently began engagement with local communities through awareness generation activities to develop common understanding on the long-term benefits of conserving tigers and their habitats, as well as the landscape approach that integrated livelihood security. Sustainable use and management, based on the foundations of community forestry, helped secure the right to resources for future generations, while also providing for current needs.





"संरक्षणको भावः आफैबाट जगावी"

समुदायमा आधारित बाघ गैडा  
संरक्षण अभियान

## SUSTAINABLE ALTERNATIVES

While community forestry provided the framework for sustainable use and management of forest resources, this had to be complemented with activities that contributed to reducing demand. This meant providing alternate sources for sustenance and livelihoods. For the former, alternate energy sources that reduced demand for firewood – such as household biogas plants and improved cooking stoves – were promoted for use by communities. For the latter, livelihood diversification activities were supported through the facilitation of micro-credit financing as well as capacity building to capitalize on potential opportunities.

Various green enterprises that allowed for the use of sustainably-extracted resources were established for communal benefits; for instance, fabrication of cane furniture, preparation of marmelos juice, etc. helped link livelihood improvement through community forestry. Individual livelihood support including capacity development training as well as base capital was provided to hundreds of poor households across the landscape. With ecotourism identified as a key activity that incentivized protection, establishment of community homestays were encouraged in sites with high wildlife sighting potential, including Amaltari near Chitwan National Park and Dalla village in Khata corridor connecting Bardia National Park to Katarniaghat Wildlife Sanctuary in India. These efforts have not only helped enhance the local economy but have also reduced the demand for forest resources, thus facilitating the sustainable management of community forests. These community forests now form parts of secure buffer zones of protected areas as well as wildlife corridors such as Khata, aiding conservation of tigers and other wildlife.





ता जैविक मार्ग  
सं रुटे गाँउ डल्ला बर्दिया  
BIATA CORRIDOR  
HOME STAY "Dalla"  
HOME NO. 4  
061 (सुमा योगी)

## CONFLICT TO COEXISTENCE

When tigers and humans co-exist, there is bound to be encounters as well as occasional conflicts. Responding appropriately to these conflicts is necessary to ensure safety of individual tiger, people and habitat; in the long-term, this may determine the survival of the species itself, as increasing conflicts may erode people's tolerance towards wildlife. Moreover, conflicts have also been linked to illegal wildlife trade. Accordingly, significant investments were made by the TAL program to address conflicts through preventive as well as mitigative measures.

Activities such as non-palatable cash crop farming were tried to reduce conflicts in various sites. Direct conflict prevention measures – such as predator-proof corrals to protect livestock and fencing to protect farms – were also implemented. Realizing that conflicts may never be completely removed, as curative measures, various funds were set up to aid the well-being of vulnerable and conflict-victim households. Establishment of relief funds and livestock insurance schemes were also supported to mitigate losses due to conflicts with tigers and other wildlife. While also providing financial support to communities, these interventions have also helped generate greater awareness on conflict prevention and mitigation as well as shared responsibility towards saving the country's natural heritage.





## TOGETHER IN CONSERVATION

Awareness and securing livelihoods were critical steps in motivating communities for stewardship in conservation. These activities have borne results in the form of individuals and community institutions directly engaged in conservation. These are exemplified in individuals' leading conservation efforts on ground despite enduring personal losses. Moreover, institutions such as Rapid Response Teams (RRTs) and Community-based Anti-poaching Units (CBAPUs) comprising local youth assist authorities in various wildlife conservation interventions. Today, more than 14 RRTs (comprising over 120 members) aiding conflict prevention and mitigation, and over 500 CBAPUs (around 5000 members) aiding in generating awareness against wildlife crimes. These units provide interested youth with the opportunity to directly engage and contribute towards the conservation of tigers and other wildlife.

## LEARNING AND ADAPTING

Over two decades of community-based conservation efforts were vindicated in the periodic national tiger population surveys. While there has been a lot of learning during these decades of efforts of community mobilization, there also continues to be many challenges. Awareness generation, livelihood support, and creation of accountable community-based institutions were among the priority steps taken; ensuring that effective functionality and sustainability are now a priority. Revamping of the country's governance mechanism in the new federal structure and aspiration for development may present newer uncertainties and challenges. Nevertheless, these achievements have been made possible with the contributions of millions of individuals. As long as those who have been touched by these conservation efforts continue to carry the flame, there is reason to hope for the better in the future ahead. 🐾









A group of people, including children and adults, are gathered in a forest. Some are sitting on the ground, while others are standing. The background is filled with green foliage and trees, creating a natural, outdoor setting. The text is overlaid on the right side of the image.

# DOWN TO A SCIENCE

Samundra Subba, Sabita Malla

## DOWN TO A SCIENCE

Conservation science provides an exciting and sometimes frightening glimpse of the status of the natural world. However, it also provides guidance on how we can make it better for humans, wildlife and the planet as a whole by re-addressing the impact of human actions. Faced with the ultimate threat of extinction, particularly in the case of keystone species such as the tiger, ecological monitoring has never been more important in understanding and determining possible solutions for their survival. Ground breaking technologies like camera traps, molecular DNA and radio-tracking have been crucial in providing fascinating insights into how the natural world works. Picking up an important indicator species to represent all-natural systems is one easy way to understand how it all plays out.





The tiger is an apex predator and a keystone species believed to single handedly regulate its entire ecosystem. An icon of biodiversity conservation, the tiger represents the functionality of an entire spectrum of ecosystem goods and services across Asian forest. For instance, large and healthy tiger populations are only possible if supported by healthy prey populations, which in turn can only be supported by quality vegetation; which mirrors good edaphic conditions of a habitat. Learning about these creatures is not only captivating and intriguing but also fundamental to preserve the massive and beautiful landscapes of Terai and its forests.

The genesis behind tiger research in Nepal started in 1972 with the launch of the tiger ecology project in Chitwan. Since then, a multitude of research has been conducted on tigers and their ecology using conventional pugmark methods as well as sophisticated methods of capturing, tranquilizing and radio-tracking tigers. These early research projects provided tremendous information into the world of tigers, and soon led to a realization that conserving these iconic predators in pocket landscapes would not be adequate to ensure gene flow and meta-population structure. This led to the formulation of the landscape level approach for tiger conservation. Terai Arc Landscape is the only tiger conservation landscape in Nepal, spread over 24,710 km<sup>2</sup> constituting five protected areas interconnected by 9 biological corridors and Churia forests.

## COUNTING TIGERS

In 2008, the Government of Nepal launched the nation's first country-wide assessment to determine the status of tigers and their prey; committing to conduct the survey every 4 years. The 121 estimated tigers from the survey, using non-invasive camera trap methods, was an eye opener in establishing a baseline for tigers and their prey density while building a solid foundation to progressively

move further. A simple but ingenious technique to remotely capture and monitor the species through photos and videos without direct intervention provided conservationists with the opportunity to not only count them through their unique stripe patterns but also understand the elusive species through vital information on their behavior and ecology.

For instance, it also helps us to understand tigers' territorial boundaries, birth of new cubs, and dispersal of sub-adults. These research findings have been crucial in catalyzing major policy level changes in the country, as well as laying the foundations for the nation's commitment to the global goal of doubling wild tigers by 2022.

Nepal has several examples to showcase to the world that a multitude of site-specific actions can lead to tiger and prey recovery. In 2018, tigers in Nepal's Bardia National Park increased by five-fold from 18 in 2009 to 87 in 2018. Meanwhile, the census also showed recolonization of the empty forests of Banke National Park from zero in 2009 to 21 in 2018. These results highlight the importance of pro-active park management, habitat connectivity and community's acceptance of living alongside tigers.

In contrast to the positive trends of country's tiger population, Chitwan National Park; the site with the highest tiger density in Nepal, showed a decline in tiger population from 120 in 2013 to 93 in 2018. This has led to research on the likelihood of tiger populations reaching a threshold in terms of tiger Ecological Carrying Capacity (ECC), consequently leading conservationists towards determining tiger ECC in Chitwan National Park. The term Ecological Carrying Capacity though is never static due to varying densities of tiger prey and will continue to differ with variable weather/climatic conditions and changes in vegetation (succession, invasive by alien species), understanding the ecological potential will help guide pro-active and effective management interventions needed for the park and the country in the future.



# Occupancy Survey Design - TAL (MAJOR GRIDS - Chitwan OTS) (Survey 1)



- Legend**
- International Boundary
  - Parking Grid (For Camera)
  - Major Grid
  - Major Grid Four Corner
  - Tiger Occupancy
  - Major Grid
  - Settlements
  - Canal Track
  - District Road
  - Feeder Road
  - Highway
  - Water Body

## BEYOND PROTECTED AREAS

Presently, Nepal has five protected areas dedicated to tiger conservation, but these protected areas alone are too small to sustain tiger populations in the long run. Large investments have therefore been made in biological corridors to secure and restore connectivity to achieve gene flow between populations within protected areas across Nepal and India. The functionality of the landscape has been established through a joint Nepal-India transboundary survey that provided evidence for tiger dispersal along the transboundary protected areas in the Terai Arc Landscape. The 2018 tiger survey captured 24 tigers from five biological corridors viz: Laljhadi (1), Khata (13), Barandabhar (4) and Someshwor hill forest (3) that also shared their territorial boundaries with protected areas. Only few tiger signs were recorded from Kamdi and Basanta corridors.

However, functionality of habitats can also change with variations in habitat dynamics. Loss of critical corridors could therefore result in the loss of all three structural, functional and compositional functions of the landscape, and may require sophisticated translocations of species to fulfill these functions. Securing and maintaining connectivity is therefore crucial for sustainable functionality of the landscape. Meanwhile, recent surveys confirm that large habitat patches outside protected areas support 4% of camera trapped tigers, indicating the potential of forests outside protected areas to sustain larger tiger populations. This is further supported by the results of habitat occupancy with 60% of the habitat occupied by tigers outside protected areas.

## THE ROAD AHEAD

Genetic studies reveal moderate genetic diversity among Nepal's tiger populations; illustrating additional room for improvement with respect to restoring connectivity across landscapes. Likewise, molecular forensics provides in-depth insights into wildlife crime in Nepal identifying tiger poaching as a continued threat to wild tigers in Nepal. As such, conservation science plays a key role in strengthening protection measures for this charismatic species.

Inching closer to the goal of 250 tigers with four more years to go, it is highly likely that Nepal will become the first country to reach the global milestone of doubling its tiger numbers by 2022. Yet, there are uncertainties regarding long-term persistence as only time will determine how these predators can or will respond to increasing population growth, economic development that continues to shrink their habitats and pose ever increasing threats to their very survival. 🐾







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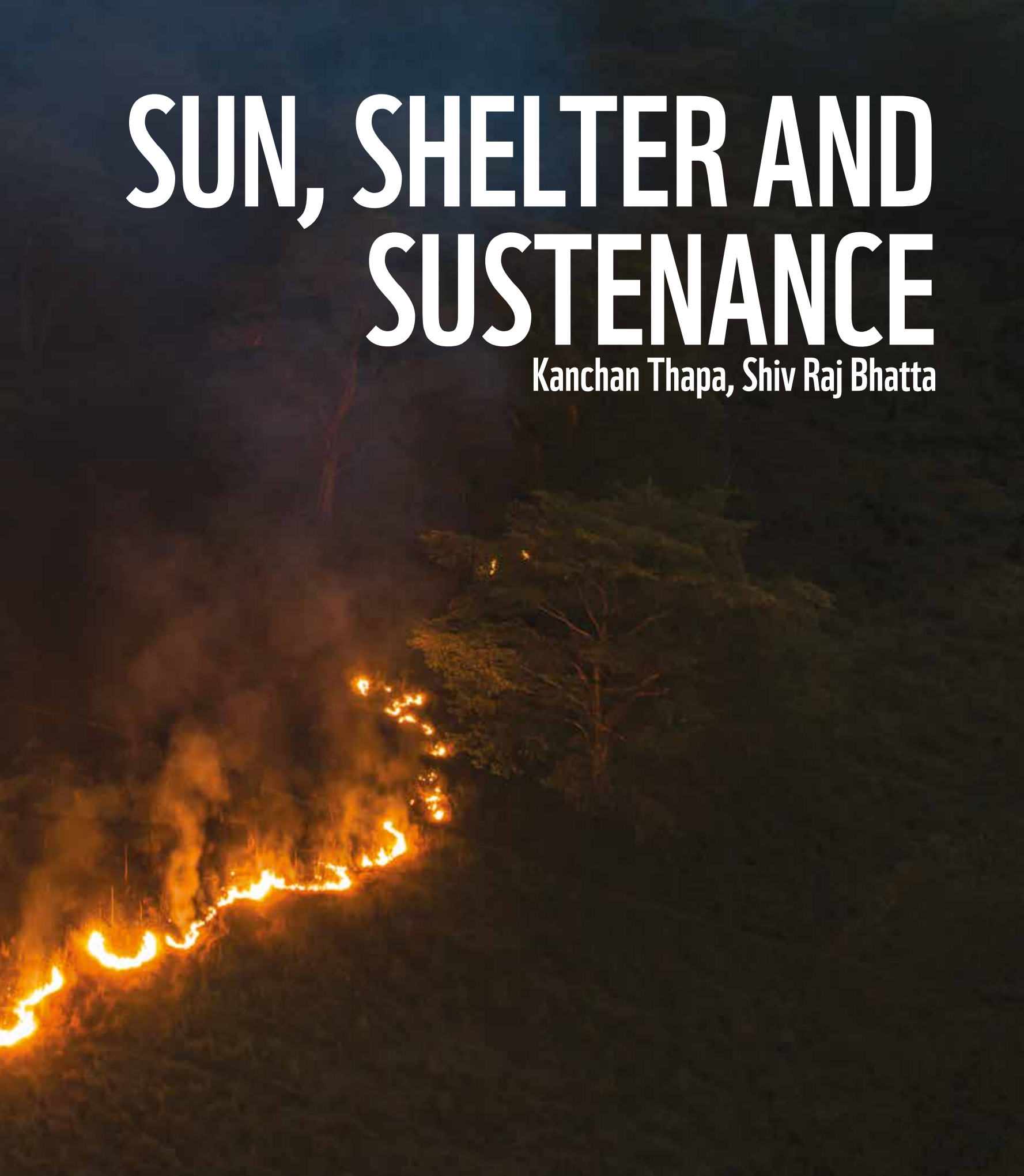


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# SUN, SHELTER AND SUSTENANCE

Kanchan Thapa, Shiv Raj Bhatta



## SUN, SHELTER AND SUSTENANCE

The political revolution in Kathmandu in the 1950's gave Rapti Valley the prospect of being transformed into an economic and political frontier from a deadly tropical zone. Additionally, eradication of malaria and migration of people from the hills brought new economic possibilities in the valley otherwise full of wildlife; a high-profile hunting ground for the elites. Trees were felled and as a result, habitats for wildlife became confined to a few core protected areas. The Government of Nepal, in a bid to develop a network of protected areas, declared Chitwan - spread over 932 km<sup>2</sup> - as the first national park of the country, protecting and securing habitats for the wild, including the majestic tiger. As of today, 3,392 km<sup>2</sup> of core wildlife residences have been declared protected for tigers and their potential prey base.





## TIGER SURVIVAL

Ecologically, tiger survival in their natural habitat depends on the availability of food - protein from meat; water from springs, rivulets, rivers, and manmade waterholes; and habitat from a mosaic of grasslands and forests. Five species of deer including sambar, spotted deer, barking deer, swamp deer, hog deer, wild boar, antelopes (nilgai, chawka) and bovine (gaur) form the potential prey base for tigers. Studies show that tigers require 200-250 kg of flesh on a weekly basis to sustain themselves. As such, maintaining tiger habitats also entails maintaining habitats for its prey base; which includes adequate grasslands and forest cover, alongside balanced availability of water resources.

As such, tiger density depends on both the quality and the quantity of available habitats. In Nepal's context, tiger habitats often include alluvial floodplain grasslands, wooded grasslands, riverine forests, and Sal forests. Lowlands usually form the core habitat for tigers with an estimated density ranging between 3-5 tigers per 100 km<sup>2</sup>. The Churia habitat, although an archetype of lowland tiger habitats, is often termed as the "forgotten tiger land" as its contribution to tiger conservation was overlooked for a long period of time. On the contrary, recent studies have shown that Chitwan National Park alone can sustain 35-40 tigers in the Churia habitat, provided an adequate prey base.

## OUR PART IN THE PLAY

Tiger recovery within critical habitats is directly proportional to its management. Today, critical habitats have been identified and good habitat management practices adopted; such as grassland management through cutting and controlled burning, rotational management, maintenance of waterholes, etc. WWF Nepal has been supporting the Government of Nepal in managing tiger

habitats on an annual basis, with an average of 200-300 ha of critical grassland habitats and numerous wetlands/waterholes managed yearly. These habitats in turn are used by thousands of herbivores; a life line for tiger populations.

Supplementing large-scale habitat management with technical capacity and periodic monitoring play a major role in effective habitat management. Consequently, WWF Nepal continues to provide support in the development of technical capacity of key authorities to manage critical tiger habitats through trainings, research support and study grants in top notch research institutes like Wildlife Institute of India, Center for Wildlife Studies-India, and National Trust for Nature Conservation-Biodiversity Research Center.

While conservation approach was initially focused on a species-based model, progression into the landscape approach consequently led to the identification of 15,000 km<sup>2</sup> of land as potential tiger habitats, and the identification of pressure points along the landscape - bottlenecks and corridors. Managing the habitat within these corridors and bottlenecks has proven critical, as it provides easy passage for tiger dispersal between core areas.

WWF Nepal initially supported the Government of Nepal in its maiden corridor restoration efforts and has continued to do so through its community forestry programs. Today, all corridors within the Terai Arc Landscape - Khata, Basanta, Brahmadev, Barandhabar, Laljhadi-Mohana, Karnali and Kamdi have been identified as prime tiger corridors. The role of community forestry and corridor management is evident through the results of long-term ecological monitoring in Khata corridor; a 6.1 km corridor forest that joins Bardia National Park in Nepal and Katarniaghat Wildlife Sanctuary in India, which shows the presence of 22 tigers using the corridor for easy dispersal between the transboundary protected areas.





## LOOKING AHEAD

Land use dynamics and other external factors have resulted in major changes in core tiger habitats, with grasslands turning into forests, drying of underground water tables, and erratic weather leading to unusual flooding patterns. Managing tiger habitats under this context is thereby a huge challenge and needs to be upscaled and intensified with critical factors such as infrastructure development and consequent impacts taken into consideration. Awareness generation will play a huge role in offsetting some of these issues in the future.

Besides managing critical habitats in core areas, an additional area of focus will need to be the management of habitats beyond protected areas, particularly critical functional corridors. Additionally, while the government has developed actions plans for various species; including the tiger, habitat management components will need more focus for ease of implementation on the ground. Over the years, WWF Nepal has supported the Government of Nepal in managing more than 10,000 ha of critical tiger habitats in the Terai Arc Landscape. As per government statistics, over 68% of potential tiger habitats in the landscape are used by tigers, a number Nepal continues to commit to and take pride in. 🐾









# EYES IN THE SKY AND BOOTS ON THE GROUND

Madhav Khadka, Puspa Pandey,  
Sunil Shakya, Dilip Subedi

## EYES IN THE SKY AND BOOTS ON THE GROUND

Nepal has made headway in setting the antipoaching standard by achieving 365 days of zero poaching of rhinos five times since 2011. A coordinated response right from the central to the grassroots level, heightened protection measures within protected areas by park staff and Nepal Army, and a clamp down on illegal wildlife trade by the Nepal Police and Wildlife Crime Control Bureaus (WCCB) have been key contributors towards Nepal achieving this zero-poaching success. However, threats to opportunistic poaching still remain with 43 tiger skins and 396 kg pangolin scales seized, and 2,258 persons arrested for wildlife crimes in the last ten years.





Inadequate enforcement, from detection, to arrest, prosecution, conviction, and penalty, are one of the fundamental drivers for wildlife crime. Nepal is committed to closing this cycle through various efforts ranging from strengthening law enforcement, adopting state of the art technology to engaging communities, judicial bodies and different government agencies. Synergetic functioning between these mechanisms has been critical, helping Nepal achieve its conservation milestones - from zero poaching of rhinos to the almost doubling of tiger numbers.

## STRENGTHENING BOOTS ON THE GROUND

Records indicate that poaching occurs mostly within parks and buffer-zones where species of high value reside, while areas outside protected area systems remain equally vulnerable to poaching. The government's commitment towards the conservation agenda is reflective through the deputation of staff within and outside protected areas to combat wildlife crime, with over 1900 park staff and over 8000 Nepal Army deployed within protected areas. While the management of protected area systems falls under the jurisdiction of the Department of National Parks and Wildlife Conservation, regions outside protected areas fall under the purview of the Division Forest Offices. The boots on the ground approach, through systematic patrols - foot, cycle, elephant, vehicle, boat, raft, long range - has been central in fortifying protection of wildlife and reducing poaching within the country.

WWF Nepal has been supporting the strengthening of protection measures through a range of interventions, from construction of guard posts at strategic points to facilitate park surveillance, support for sniffer dogs to apprehend poachers, to various capacity building programs for park authorities - for instance, through the conservation school which sensitizes new army personnel deployed to protected areas on wildlife conservation, antipoaching, and wildlife crime. Additionally, a Wildlife Identification Manual and an Anti-Poaching Training Syllabus have been endorsed by the government to further strengthen the capacity of the Nepal Police to control wildlife crime.

## TECH SAVVY RESPONSE

The use of cutting edge technologies to aid existing conservation and antipoaching efforts has been pivotal in strengthening boots on the ground and facilitating access to information to strategize effective antipoaching response. Technologies like Real-Time SMART Patrolling, an android-based platform on mobile devices through which patrol teams record and update patrolling and locational data in real-time, have allowed for 24-hour monitoring of patrols, aided swift antipoaching response, helped assess gaps in patrol area coverage and provided for paperless and prompt reporting to headquarters. The system is currently in use in all national parks of the Terai Arc Landscape, Koshi Tappu Wildlife Reserve and Lamtang National Park.

Meanwhile SMART Eye (an android-based mobile app that takes and transmits images at regular intervals to park headquarters) GPS enabled vehicle tracking systems and CCTV camera networks are in operation to achieve round-the-clock surveillance of national parks. The cameras are continuously monitored from the Joint Operation Cells established in the park headquarters. An optical fiber network wireless tower has also been laid out in Chitwan National Park and Bardia National Park to facilitate operations of antipoaching technologies.

## ENGAGING COMMUNITIES

Socio-economic dynamics play a major role in wildlife poaching in Nepal. Oftentimes people living in and around protected areas have limited livelihood opportunities. With perceived benefits outweighing the risks associated with wildlife crime, vulnerable community members are easily lured by criminal networks to assist in wildlife crimes; such as poaching, hiding wildlife parts, serving as informants, amongst others, primarily due to lack of awareness of the ecological and legal implications.

With rhino poaching peaking in 2002, WWF Nepal initiated its first support towards addressing wildlife crimes through *Operation Unicornis* in 2007. The operation was established with the objective of tackling core issues of awareness among communities on the repercussions of wildlife crimes and the long-term benefits of conservation. This ultimately laid the foundations for the formation of





the Tiger Rhino Conservation Coordination Committee which, over the years, has facilitated the development of prompt information sharing mechanisms on suspected activities and enforcement agencies, allowing for swift on the ground action.

The national parks of Nepal are like islands surrounded by human settlements. Park administration alone is therefore insufficient to detect and control illegal activities beyond protected areas, such as in community forests and buffer zones. Consequently, front line staff such as forest guards, community institutions such as Community Based Anti-Poaching Units (CBAPUs), play a major role in the conservation of local biodiversity, and is a central tenet of community based conservation.

## LOOKING AHEAD

So, what's next for this Himalayan nation against the backdrop of an inspiring conservation feat? While sustaining its zero-poaching success, the aim is to achieve zero transit for illegal wildlife trade in Nepal. While Nepal has achieved zero poaching of rhinos five times since 2011, challenges still persist. Our future areas of action will need to address institutionalization and systematization of the zero poaching framework; which includes six pillars - assessment, technology, capacity, community, prosecution, and cooperation, replication of zero poaching for other key species beyond rhinos, as well as strengthening and capacitating institutions outside protected areas. 🐾









# SKIN, BONES AND MORE

Madhav Khadka, Puspa Pandey  
Sunil Shakya, Dilip Subedi

## SKIN, BONES AND MORE

From the elusive snow leopard in the north, to the Bengal tiger prowling the forests in the south, Nepal is home to a rich assemblage of iconic species. Poaching however remains a pertinent threat arising primarily from international demand for skin, bones and more, fueling illegal wildlife trade and thereby endangering the survival of these iconic species. However, ever increasing demands for wildlife parts, despite stringent international action, means that origin countries such as Nepal face tremendous threats from poaching on its iconic species.





WILDLIFE WARDEN  
NATIONAL PARK  
SUNDERLAND  
TERRACE, JHAPA

Nepal's rich biodiversity coupled with its geographical location, porous borders and insufficient enforcement, relegates it to an origin country as well as a major transit point for illegal trafficking of wildlife parts, with the animal killed in source countries, and moved to consumer countries via transit countries. Illegal wildlife trade often involves multiple channels for trafficking which requires collective efforts with respect to its controlling mechanism. Nepal has been working to tackle this transnational issue through a multi-pronged approach that attempts to tackle demand through policy level changes, new institutional structures, and transboundary cooperation, while also addressing the source through partnerships and capacity enhancement of enforcement agencies.

## EFFORTS TO CONTROL TIGER TRADE IN NEPAL

Nepal is considered a source country as well as transit point for tiger trade, and a major reason behind this is the lack of awareness, reliance on natural resources, and low livelihood diversification opportunities on the part of local communities. WWF Nepal has therefore been actively working on this front through various mechanisms, ranging from sensitizing vulnerable groups likely to be targeted by wildlife traffickers, to capacitating stakeholders working at customs and border security points, and youth.

While essential, awareness alone is not enough to curb wildlife trade and must be complemented by stringent polices. The Government of Nepal has rigorous wildlife policies in place ranging from the National Parks and Wildlife Conservation Act - 1973, CITES Act - 2017, Prevention of Organized Crime Act - 2013, etc. These pieces of legislation have categorized wildlife crime as organized crime, prohibited tiger trade in and out of the country and included harsh penalties such as imprisonment up to 15 years for tiger-related crimes.







## INSTITUTIONAL ENGAGEMENTS

The “People to Prime Minister” approach formed by the Government of Nepal is illustrative of the government’s commitment to control illegal wildlife trade. This institutional structure includes a National Tiger Conservation Committee (NTCC) chaired by the Prime Minister of Nepal, National Wildlife Crime Control Coordination Committee (NWCCCC), chaired by the Minister of Forest and Environment, the Wildlife Crime Control Bureau (WCCB) at the central level chaired by the Director General of Department of National Parks and Wildlife Conservation (DNPWC), as well as WCCB district cells and Community Based Anti-Poaching Units (CBAPU).

In this network, the CBAPU acts a watch dog at the community level and provides information to WCCB district cells. Following this, the WCCB district cells, which act as field level enforcement agencies, coordinate with key stakeholders in curbing the illegal activities. 25 WCCB district cells have been established in 27 districts, with the central WCCB body providing guidance, NWCCCC facilitating policy formulation and amendment, and NTCC making political commitments and paving the way for policy formulation. WWF Nepal has played a key role in the institutionalization of these mechanisms through its engagement in policy and advocacy and continues to support its operationalization.

## DISMANTLING THE WILDLIFE TRADE NEXUS

Tackling organized and transnational wildlife crime is possible only through regional cooperation and strong partnerships. The Government of Nepal has been working with the governments of China and India to address illegal wildlife trade and control through transboundary cooperation. Under its regional cooperation initiatives, Nepal is the member secretariat of the South Asia Wildlife Enforcement Network (SAWEN) which works to promote collaboration at the national, regional and international levels and enhance information sharing mechanisms and enforcement on wildlife crime in the region. WWF Nepal plays an important role in facilitating regular transboundary meetings with India and China at national as well as local levels.

Integrated efforts by the Government of Nepal have shown results with the Central Investigation Bureau (CIB) of Nepal and its police force playing a key role in dismantling these trade routes. Between FY 2008 and 2019, a total of 49 tiger skins, 204.6 kg tiger bones, 59 tiger bone pieces and 122 tiger canine teeth have been seized in Nepal. This has been possible due to dedication and combined effort of enforcement agencies.

At the local level, the Armed Police Force (APF) and custom officials play a key role in maintaining border security in Nepal. As such, strengthening these stakeholders is an important part of Nepal’s strategy in controlling transboundary trafficking of wildlife parts and derivatives. Since 2017, over 1000 APF cadets and officers have been capacitated alongside frontline staff of customs offices at borders and Nepal’s international airport. Meanwhile, postal service offices have been also sensitized on illegal issues related to the wildlife trade.

## GAPS, CHALLENGES AND OPPORTUNITIES

Lodged between India and China, Nepal is the bitter spot for illegal trade with criminal networks using the country as a transit point. The transboundary agreements with China and India important steps taken by Nepal government. By squashing trade within its national boundaries while strengthening transboundary collaboration with its neighbors, Nepal could well be on its way towards another conservation milestone enthused by the antipoaching excellence in rhino conservation it has demonstrated over the years. Political commitment will always be at the forefront of this goal, and with Nepal’s new federal structure, stronger coordination at the federal, provincial and local government levels will be imperative to implement policies and legal provisions. It is crucial that this is supplemented by frontline actions of enforcement agencies and local communities including application of conservation technologies, together with global, regional and bilateral fora and mechanisms in curbing poaching and controlling illegal wildlife trade. 🐾







# SAFEGUARDING THE TIGER'S TRAIL

Pramod Neupane, Prasan Karmacharya

## SAFEGUARDING THE TIGER'S TRAIL

The onset of road networks across landscapes has been crucial to development a connecting thread for people across geographies which has had multitudinous impacts across generations. This connectivity has allowed humans to grow, develop and thrive at an astonishing pace. Much like the roads that connect humans, forests for decades have played this crucial role of connectivity for wildlife; to roam, thrive and prosper. However, increased development of large linear infrastructure – roads, irrigation canals, pipelines, transmission lines - over decades, has resulted in infringement across forest landscapes resulting in fragmentation of tiger habitats and disruption of wildlife movement. These adversities in forest connectivity have the potential to impact decades of conservation efforts for the wide-ranging tiger species.





**DRIVE SLOW**



**WILDLIFE CROSSING ZONE**

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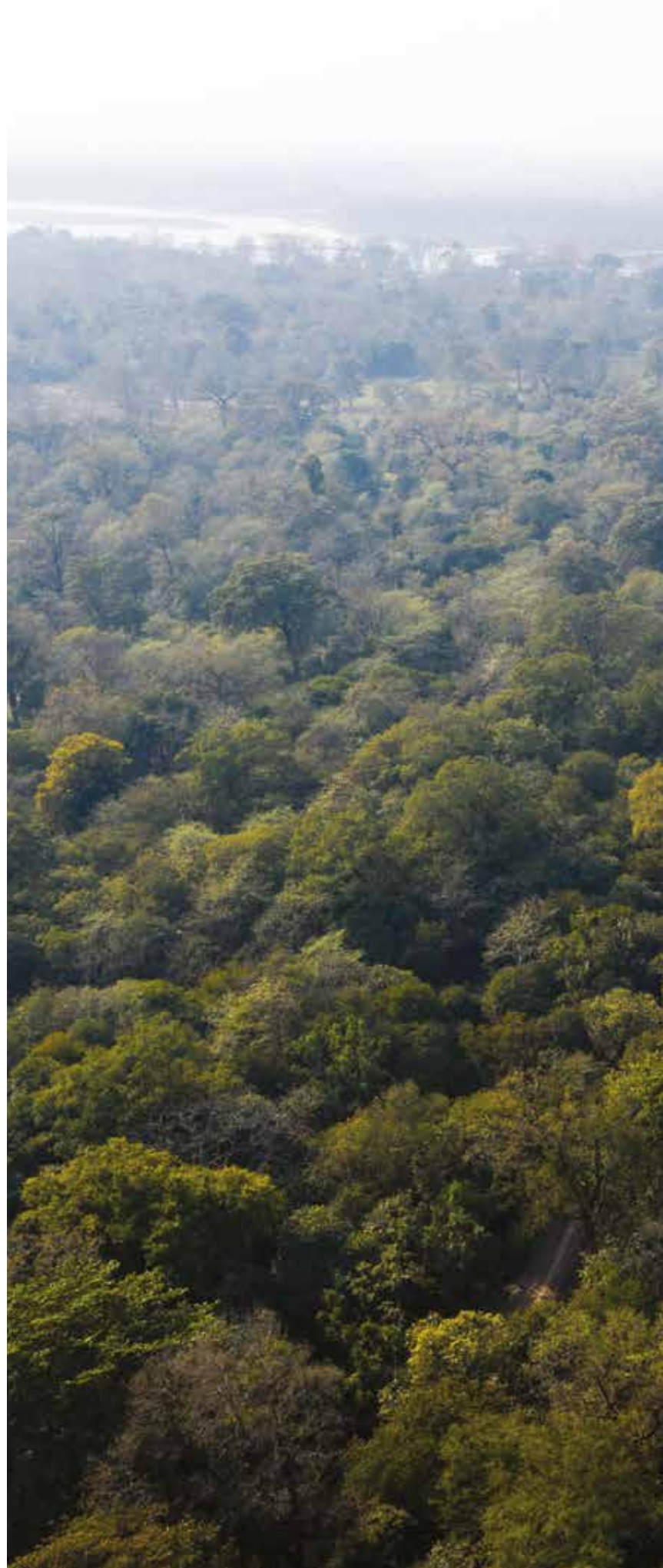


## THE INFRASTRUCTURE BOOM

With Nepal geared to graduate from a Least Developed to a Middle-Income Country by 2030, the demand for infrastructure development has been at an all-time high. While Nepal has seen encouraging growth in its tiger numbers, with an estimated 235 tigers in 2018, from an estimated 121 in 2009, the animal now faces unprecedented challenges from rapid infrastructure growth, from wide ranging roads to electrified railways, exploration of potential hydropower projects, transmission lines and irrigation canals along the conservation hotspots of the Terai Arc Landscape. The transboundary Terai Arc Landscape has been fragmented by east-west and north-south linear intrusions which will predictably have negative impacts on tiger habitats. These development indicators impose inevitable pressures on wildlife throughout Nepal, as they cut through national forests, corridors, and core protected areas.

Forest degradation, habitat fragmentation, vehicle-wildlife collision (VWC), electrocution and drowning are some of the major impacts of linear infrastructure on wildlife. Meanwhile, encroachment into critical corridors and bottleneck areas—a result of unplanned urbanization and population growth concentrated in major cities—raises alarming issues in terms of disrupting connectivity between forests, leading to manifold issues in terms of meta population management for tigers.

The impacts of infrastructure development and disruption of connectivity is evident through statistics, with almost 130 road kills every year on the roads that traverse through the protected area systems. While most roadkill incidences recorded include prey species, Nepal has experienced two incidents of vehicle wildlife collision involving tigers. The first incident in December 2016 resulted in death, whereas another incident in January 2019 resulted in grave injury, leaving little hope for the tiger to return back to the wild.







## SUSTAINABLE GREEN INFRASTRUCTURES

Avoidance of critical habitats and wildlife corridors is the best strategy to secure tiger habitats, and there has been a few exemplary efforts avoiding critical protected areas and wildlife corridors; for instance, the realignment of electrified railways away from Chitwan National Park. Another example is the construction of the first ever underpasses constructed across the Narayanghat-Mugling road. An assessment on the functionality of these underpasses has indicated frequent use by medium and small sized wildlife. Initiatives such as these, alongside establishing speed limits across roads traversing protected areas, has helped minimize wildlife deaths from vehicle wildlife collision by a substantial rate. Consequently, results from the assessment have motivated developers and conservationists to replicate such mitigative efforts at other locations to minimize the risks to both humans and wildlife.

As such, WWF Nepal is also involved in advocacy with multilateral partners, donors, developers and implementers on piloting and promoting various mitigation measures such as wildlife crossings based on monitoring of wildlife movement, introduction of guiding fences, and reflective road signage at strategic locations. Such examples only go on to indicate the importance of incorporating discussions on alternatives with relevant conservation stakeholders while planning linear infrastructure, which could significantly promote ecologically sustainable infrastructure.

## POLICY AND ADVOCACY

The role of policymakers and investors in tiger range countries is crucial in supporting infrastructure that promotes long-term sustainable development while realigning harmful linear infrastructure development. WWF Nepal has been a key stakeholder in supporting the Government of Nepal, going beyond conventional partnerships to embrace development and other stakeholders together for the cause of conservation. One such outcome has been the development of a “Wildlife Friendly Linear Infrastructure Guideline,” created in partnership with development and conservation stakeholders, and currently awaiting endorsement by the government.

While steps to integrate ecological systems into development planning are emerging into practice, to achieve the goal of doubling wild tiger populations by 2022, tiger range country policymakers need to adapt decisions based on long-term research and evidence that better take into account the needs of tiger landscapes. This includes identifying areas crucial for survival of tigers and preserving corridors that are critical to tiger movement. Transboundary tiger landscapes should be planned jointly with inter-correlation between policy makers and planners to streamline mitigation strategies for adjacent countries to reduce impacts of linear intrusions at a regional scale.





## THE ROAD AHEAD

An integrated planning approach with baselines on wildlife science backed by research for large linear infrastructure crossings through tiger habitats are necessary requisites to preserve the iconic umbrella species, whose safety ensures a healthy natural ecosystem. In partnership with the Government of Nepal, development partners and conservation stakeholders, WWF Nepal will continue to work to reduce the impact of linear infrastructure development on biodiversity while also maintaining the ecological integrity of the environment through various policy mechanisms and ground interventions. 🐾







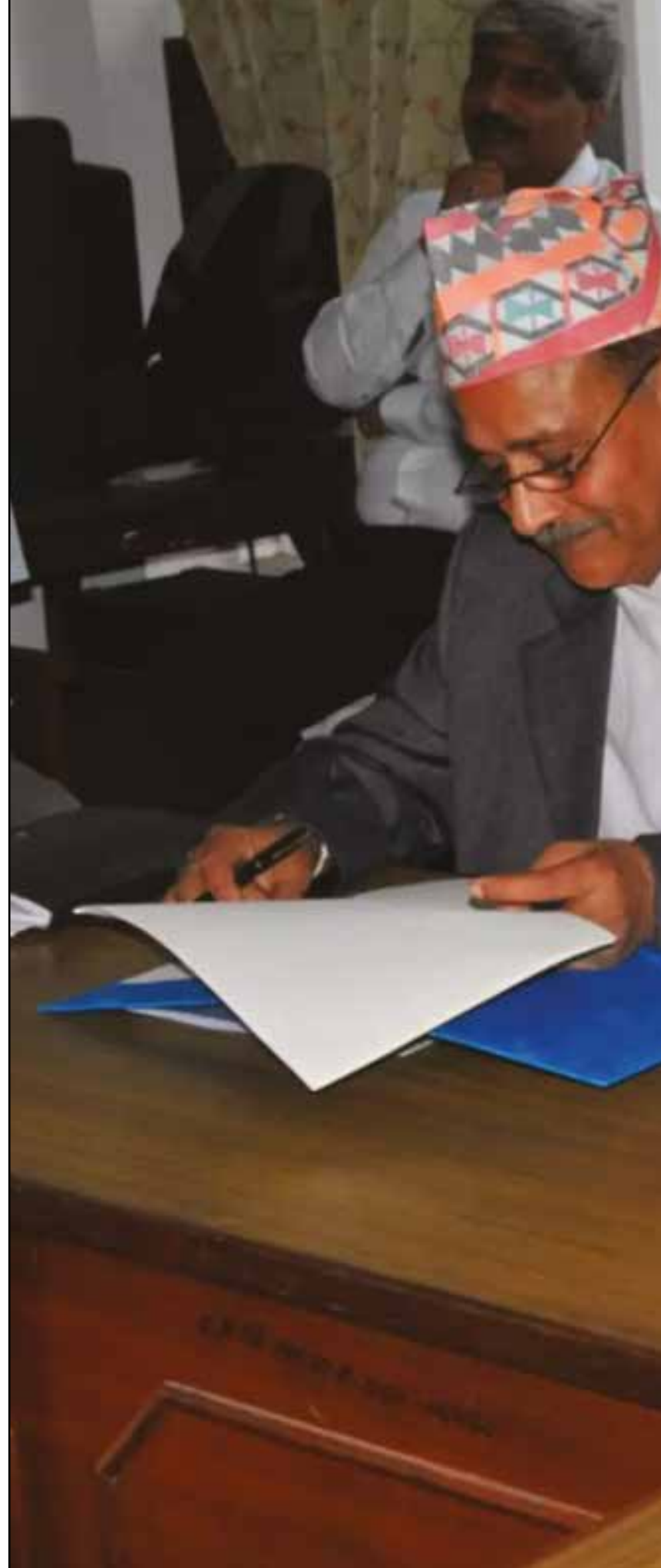
# SET IN STONE

Santosh Mani Nepal



## POLICY AND ADVOCACY

Over the last 70 years, tiger conservation has drastically evolved in Nepal. Until the 1950s, tiger hunting was considered a popular diplomacy tactic, largely with British India. A historical hunting mission has been widely described in the diplomatic history of Nepal when King George V was invited to hunt in December 1911. During the 10-day mission, a total of 39 tigers were hunted from Shukhibhar and Kasara of Chitwan. After the collapse of the Rana regime in 1950s, the government opened the lower plains of Nepal for human settlement. This led to an influx of people migrating from the mid-hills to Terai, resulting in clearing of forests for settlements, agriculture and other development activities. By late 1960s, tiger numbers had plummeted to a historical low, as did rhino numbers.







Alarmed by the significant decrease in tiger populations, the Government of Nepal adopted a new policy to set up national parks. This led to the establishment of Nepal's first national park in 1973, the Chitwan National Park; established with the objective of conserving tigers and rhinos in their natural habitats. In the meantime, other protected areas were also declared across Terai, multiplying the habitats for tigers, their prey and other wildlife.

However, on the societal front, wild animals, including tigers, were deemed a source of conflict. Settlements were relocated from the park boundary to make space for animals. The presence of tigers and other animals in the park did not produce any perceived tangible positive benefits in the lives and livelihoods of local communities. Frequent encounters between wildlife and locals fostered a sense of mistrust and confusion between communities and the conservation fraternity. This situation lasted for more than two decades in Chitwan. A major shift in policy was made in 1993, when the government changed its conservation policy and introduced the concept of buffer zones with a provision of sharing the benefits accrued from the national park management with the local communities.

## THE PARADIGM SHIFT

The mid 1980s witnessed a drastic shift in policies related to conservation and natural resource management. Foundations were laid for the introduction of a people-centered forest management approach. A 20-year masterplan for the forestry sector was designed with a comprehensive people-centered policy in 1989. A new forest act was passed in 1993, which placed further emphasis on community-based conservation of the forest resources. The fourth amendment on national park and wildlife conservation act in 1993 introduced the concept of buffer zones: land surrounding the immediate vicinity of designated protected areas. People living within these zones could receive up to 50% of the benefit accrued from the park management. This shift in policy was a game changer in enhancing local ownership for park management.





By the time buffer zones were delineated on the ground and benefits started flowing, two important externalities exerted strong negative impacts on tiger conservation efforts. The first one was the growing insurgency within the country that critically minimized protection efforts of enforcement agencies and second, a growing consumer appetite for wildlife parts in the neighboring countries in South East Asia. The conservation effort was largely set back by the latter, as it triggered poaching and the illegal trade of wild animals.

## THE DECADE OF HOPE

The first decade of 21st century witnessed two diverse scenarios in conservation – an incline in poaching and a decline in public sector investment in conservation. This was primarily due to the withdrawal of armed security forces from protected areas during the Maoist insurgency, resulting in easy access for poachers. The signing of the comprehensive peace agreement in November 2006, however, marked a turning point for many issues in the country's tiger conservation efforts. The increasing loss of tigers and their habitat, in Nepal as well as other tiger range countries, led to deeper dialogue between the Government of Nepal, political parties, local communities, conservation partners and others committed towards bringing the conservation of this charismatic species onto the national and global agenda.

This subsequently led to an integrated approach for the protection of wildlife and social mobilization, with the establishment of two institutions in 2010. The National Tiger Conservation Committee (NTCC) was formed to provide policy level guidance and ensure political commitment from government and political parties, linking tiger conservation work on the ground with the head of the government—the prime minister (Box 1). The second institution, the Wildlife Crime Control Bureau (WCCB), was established to control poaching and trafficking of wildlife and their parts—linking communities with all sectors of governments. Meanwhile, as a crucial conservation partner to the government, WWF

Nepal continued its support to the government and other relevant stakeholders to strengthen policy on biodiversity conservation and sustainable development.

## SUCCESS IN TIGER CONSERVATION

Despite being the source and transit for illegal wildlife trade, Nepal has made significant contributions to breaking the illegal trade network. Nepal currently also leads the regional initiative on curbing wildlife crimes through the South Asian Wildlife Enforcement Network (SAWEN). Meanwhile, more legal instruments have come into existence. Wildlife crime was placed under the preview of Organized Crime Prevention Act 2014. If the money involved under any wildlife crime is presented as evidence, it could automatically warrant the provision on Anti-money laundering Act 2014 (second amendment). Similarly, the panel code of Nepal categorized wildlife crimes as a crime of serious nature and calls for deeper crime investigation and prosecution. 🐾





# TRANSCENDING BOUNDARIES FOR TIGERS

Shiv Raj Bhatta , Shant Raj Jnawali

## TRANSCENDING BOUNDARIES FOR TIGERS

For tigers, transboundary landscapes are indispensable. This is particularly evident in the Terai Arc Landscape, forested regions that stretch across the borders between Nepal and India - the last remaining prime habitat for tigers. With Nepal's Bagmati river to the east and India's Yamuna River to the west, this last transboundary refuge of 25,000 km<sup>2</sup> houses an estimated 800 tigers inhabiting 15 protected areas. As is the case with other transboundary tiger habitats in the region, including trans-boundary Manas Conservation Area (India-Bhutan) and Sundarbans Landscape (India and Bangladesh), cooperation across borders is an integral component of tiger conservation in the Terai Arc Landscape.







KfW



**CHITWAN-PARSA-VALMIKI.COMPLEX:**  
Area 3,669 km



B, LODHI ESTATE, NEW DELHI- 110003

Tiger conservation work beyond borders has become especially important over the last five decades as major threats - including land use change triggered by drivers such as growth in human population, large-scale forest encroachment for agricultural expansion, and urbanization - have severely affected tiger habitats. Tiger poaching in transborder areas and the continued illegal trade of tiger body parts have also left long-lasting destructive impacts on tiger populations. As they continue to roam between and across border landscapes, it has never been more imperative for countries to ensure the safety of these natural assets through sustained transboundary partnership and cooperation.

## INCEPTION- CONSULTATIVE MEETINGS

WWF Nepal has been facilitating transboundary cooperation through the organization of bilateral consultative meetings. The first national level transborder consultative meeting between Nepal and India was held in 1997 in Kathmandu, Nepal and thereafter continued to convene at different timeframes in various locations across Nepal and India. This bilateral cooperation fostered an avenue to discuss issues, challenges and prospective future steps to manage habitats for wildlife, and curb poaching and illegal trade of wildlife and forest products on either side of the boundaries. One key outcome of these meetings has been the passing of the resolution on biodiversity conservation by both parties. Besides strengthened cooperation between the two governments and enhancing the joint effort among grassroots professionals and borderland communities involved in conservation, the resolution has also paved the way forward for the signing of a Memorandum of Understanding.

The decisions of the third trans-boundary consultative meeting held in 2002 in Kathmandu allowed the regional Directors of Forest (now Divisional Forest), Nepal and Conservators of Forests, India to maintain and foster their partnership and cooperation in addressing roadblocks related to transboundary conservation areas as they arise.

The spirit of transboundary cooperation was reaffirmed when both governments committed to host regular meetings to further sustained dialogue and action. High levels of political commitment towards trans-border biodiversity conservation and cooperation were also demonstrated

during a recent meeting held in India, on 9th October 2018 chaired by Deputy Chief Minister/Minster of Forest and Environment of Bihar.

Transboundary cooperation has been instrumental in fostering an information-sharing channel between protected area authorities who have helped curb poaching and control the illegal wildlife trade nexus operating in both countries. These avenues for sustained dialogue have also resulted in major strides towards estimating tiger populations in the region; In 2013, a tiger survey was conducted along potential tiger habitats in the Terai Arc Landscape (India and Nepal), which led to the joint publication of a survey report. The 2013 survey has been supplemented by continued efforts to estimate tiger populations. These forms of knowledge production highlight how transboundary cooperation between the two countries can advance the global commitment towards tiger conservation.

## WAY FORWARD

Signing the memorandum of understanding on biodiversity conservation would secure the next win in institutionalizing the outcome of transboundary cooperation between Nepal and India. With regards to tiger conservation, controlling illegal wildlife trade, curbing poaching and promoting wildlife-friendly large infrastructure along transborder areas are among the major remaining challenges, necessitating continued transboundary cooperation and sustained partnerships. On-going local efforts on either side of the border and regular local and national consultative meetings between Nepal and India will ensure the protection and safety of tigers as they continue to roam across boundaries. 🐾









# ACKNOWLEDGMENTS

WWF Nepal would like to express sincere heartfelt gratitude to institutions and individuals, whose administrative, financial and technical contributions continue to be critical in enabling tiger conservation in Nepal. Their support has been invaluable in bringing Nepal to the forefront of global tiger conservation efforts

## CREATING ENABLING POLICY ENVIRONMENT

Ministry of Forests and Environment  
Department of National Parks and Wildlife Conservation  
Department of Forests and Soil Conservation  
Nepal Army  
Nepal Police  
Armed Police Force

## LEADING IMPLEMENTATION OF CONSERVATION INITIATIVES

Parsa National Park  
Chitwan National Park  
Banke National Park  
Bardia National Park  
Shuklaphanta National Park  
22-Division Forest Office (Rautahat, Bara, Parsa, Makwanpur, Makwanpur (Rapti) Chitwan, Nawalpur, Parsi, Rupandehi, Palpa, Kapilvastu (Gautam Buddha Chandrauta), Kapilvastu (Taulihawa), Dang, Deukhuri, Banke, Bardia, Surkhet (Bheri), Surkhet (Birendranagar), Kailali, Kailali (Pahalmanpur), Kanchanpur, Dadeldhura

## PARTNERING ON THE GROUND CONSERVATION INTERVENTIONS

Community Forest User Group  
Buffer Zone Management Committee  
Community Forest Coordination Committee  
Community-Based Anti-Poaching Unit

## PROVIDING LEVERAGING SUPPORT

National Trust for Nature Conservation  
Zoological Society of London-Nepal  
Federation of Community Forest User Groups, Nepal  
CARE-Nepal  
IUCN-Nepal

## SUPPORTING TIGERS, TERAJ AND COMMUNITIES

CISCO  
DFID  
IUCN/KFW  
Google Foundation  
International Union for Nature Conservation  
Leonardo DiCaprio Foundation  
Ministry of Foreign Affairs (MFA)  
Richard Devereaux Foundation  
Save the Tiger Foundation (STF)  
Save the Tiger Foundation/ National Fish and Wildlife Foundation  
Sall Family Foundation  
Tigers Alive Initiative-WWF International  
WWF Australia  
WWF Canada  
WWF Denmark  
WWF France  
WWF Finland  
WWF Germany  
WWF International  
WWF Malaysia  
WWF Netherlands  
WWF Singapore  
WWF UK  
WWF US  
Whiskas  
USAID  
USFWS





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3

WWF Nepal works in three landscapes - Terai Arc Landscape, Chitwan Annapurna Landscape and Sacred Himalayan Landscape

1993

WWF Nepal office was established in 1993



4

WWF Nepal's programs focus on 4 goals; Forests, Wildlife, Climate & Energy and Freshwater

1,500+

WWF Nepal works with 1500+ community-based organizations in conservation nationwide



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To stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature.

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