

# PROTECTED AREA MANAGEMENT STRATEGY 2022-2030



Government of Nepal  
Ministry of Forests and Environment  
Department of National Parks and  
Wildlife Conservation



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Government of Nepal  
**Ministry of Forests and Environment**  
Singhadurbar, Kathmandu



# MESSAGE

Policy documents always escort and encourage to the implementer to move forward for better outcomes. It gives way forward and recommends strategies and actions with timeframe. Though Nepal has made tremendous progress in biodiversity conservation, we realised need of a strategic plan of the Department of National Parks and Wildlife Conservation of Nepal. This ‘Protected Areas Management Strategy (2022 - 2030)’ is a small endeavour but gives a clear roadmap to move ahead creating climate resilient ecosystems and self-sustaining protected area management in Nepal by 2030. I request all the government agencies, conservation partners, private sectors, and local communities to support implementation of this strategy and strategic actions that ultimately contribute to the national prosperity. I would like to thank all the experts and policy makers who contributed to develop this strategy.

**Pradeep Yadav**  
**Minister**

Kathmandu, Nepal  
23 September 2022



Government of Nepal  
**Ministry of Forests and Environment**  
Singhadurbar, Kathmandu



# FOREWORD

Nepal is rich in both faunal and floral diversities. The Government of Nepal has given high priority to protect its biodiversity since early 1970s. The enactment of National Parks and Wildlife Conservation Act (1973) and CITES Act (2017), and establishment of the National Parks, Wildlife Reserves and Conservation Areas, Hunting Reserve and Buffer Zones are its evidence. As a result, 20 protected areas are established across the country and managed with various conservation modalities. This Protected Area Management Strategy (2022-2030) is another milestone to align the biodiversity conservation activities with sustainable development goals, post 2020 biodiversity framework and decisions of various multilateral environmental agreements that Nepal is a party. I thank Dr. Maheshwar Dhakal, Director General of the Department and his team for coming out with a clear vision-mission, goals and strategies which will serve as a guiding document for safeguarding the biodiversity assets of the country.

**Pem Narayan Kandel, PhD**  
**Secretary**

Kathmandu, Nepal  
23 September 2022



Government of Nepal  
Ministry of Forests and Environment  
**Department of National Parks and Wildlife Conservation**  
Babarmahal, Kathmandu



# ACKNOWLEDGEMENTS

Department of National Parks and Wildlife Conservation is the lead organization to conserve biodiversity resources in Nepal. Although the Department is firmly guided and anchored by a strong legal instrument, there is a gap in driving the department to its desired direction and destination. This Protected Area Management Strategy (2022-2030) is the first endeavor of its kind to guide the department in creating climate resilient and self-sustaining Protected Area systems by 2030. This strategy was prepared after a rigorous discussion with policy makers and thematic experts representing conservation partners - IUCN Nepal, National Trust for Nature Conservation, WWF Nepal and ZSL Nepal. I would like to extend my sincere thanks to all experts and policy makers for their outstanding contributions. I am equally thankful to all staff members of Department of National Parks and Wildlife Conservation for their support and contribution. Finally, I would like to request all conservation stakeholders to support implementation of this strategy.

Thank you.

A handwritten signature in black ink, appearing to read "Maheshwar Dhakal".

**Maheshwar Dhakal, PhD**  
**Director General**

Kathmandu, Nepal  
23 September 2022

# ACRONYMS AND ABBREVIATIONS

BZ	Buffer Zone
CBD	Convention on Biological Diversity
CBAPU	Community Based Anti-Poaching Unit
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
DNPWC	Department of National Parks and Wildlife Conservation
GCF	Green Climate Fund
GEF	Global Environment Facility
GTF	Global Tiger Forum
HWC	Human-Wildlife Conflict
IUCN	International Union for Conservation of Nature
MOFE	Ministry of Forests and Environment
MoU	Memorandum of Understanding
NTCC	National Tiger Conservation Committee
NWCCCC	National Wildlife Crime Control Coordination Committee
NTNC	National Trust for Nature Conservation
OECM	Other Effective Area-based Conservation Measures
PAs	Protected Areas
PES	Payment for Ecosystem Services
SAWEN	South Asia Wildlife Enforcement Network
TAL	Terai Arc Landscape
UNESCO	United Nations Educational, Scientific and Cultural Organization
USAID	United States Agency for International Development
WCCB	Wildlife Crime Control Bureau
WHS	World Heritage Site
WWF	World Wide Fund for Nature



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# INTRODUCTION



Nepal is exceptionally rich in biological diversity despite its small geographical area, which reflects its unique geography and varying latitude and climate. The country lies between two faunal biogeographic realms-Palearctic and Indo-Malayan and five floristic regions within the short geographic variation. It harbors tremendous diversity of flora, fauna, and ecosystems. Over 200 species of mammals, nearly 900 species of birds, and about 190 species of herpeto-fauna are reported from the country.

## 1.1 CONTEXT

Nepal is exceptionally rich in biological diversity despite its small geographical area, which reflects its unique geography and varying latitude and climate. The country lies between two faunal biogeographic realms-Palearctic and Indo-Malayan and five floristic regions within the short geographic variation. It harbors tremendous diversity of flora, fauna, and ecosystems. Over 200 species of mammals, nearly 900 species of birds, and about 190 species of herpeto-fauna are reported from the country.

The Government of Nepal has taken many strategic steps to conserve its biodiversity resources to maintain ecosystem health and contribute to national prosperity. The history of biodiversity conservation was formally started during the early 1970s with a special focus on endangered species by establishing protected areas (PAs). Chitwan National Park (CNP) was declared as the first national park in 1973 to protect greater one-horned rhinoceros. Since then, a network of twenty PAs (National Parks-12, Wildlife Reserve-1, Hunting Reserve-1, Conservation Area-6 and Buffer Zones-13) has been established covering 23.39 % of the country's land. These PAs represent alluvial tall grasslands and tropical forests in the low land Terai plains to the rugged and snow-covered mountains and dry rangelands in the high mountains (Fig. 1). A total of six out of 10 wetlands of global importance (Ramsar sites) are within protected areas. About 18 % of the country's total forest area lies inside the protected areas, storing thousands of tons of carbon and immense potential for climate change adaptation and mitigation.

The Department of National Parks and Wildlife Conservation (DNPWC) is the administrative authority for protected area management in Nepal. The

Department envisions managing Nepal's protected areas through a participatory, sustainable, and science-based approach contributing to national prosperity. The objectives of DNPWC are guided by the country's constitution, existing rules and regulations, policies and strategies, periodic development plans, and various multilateral environmental agreements including Convention on Biological Diversity (CBD), Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), and Ramsar Convention. The core mandates of DNPWC are wildlife habitat management, species conservation, research and monitoring, conservation education, law enforcement, and wildlife crime control. DNPWC is also responsible for conserving and managing Ramsar sites and works as the national authority for CITES, Global Tiger Forum (GTF), South Asia Wildlife Enforcement Network (SAWEN), and International Union for Conservation of Nature (IUCN).

Over the last five decades, the DNPWC has made significant progress in protected area management and witnessed paradigm shifts in conservation approaches. The socio-economic situation, and national and international scenario of the protected area management system has changed in the recent years. Likewise, the governance system has transformed into a federal republic, human demography has changed, and people's aspiration has increased. Habitat loss, degradation and fragmentation, wildlife crime, human-wildlife conflict, encroachment of invasive alien species and adverse impacts of climate change have posed serious threats to biodiversity conservation. Against this backdrop, this Strategy (2022-2030) has been prepared to provide the strategic road map for the effective and sustainable management of the PAs of Nepal. The strategy intends to consolidate the past achievements and anticipates in creating climate resilient and financially self-sustaining PA systems.

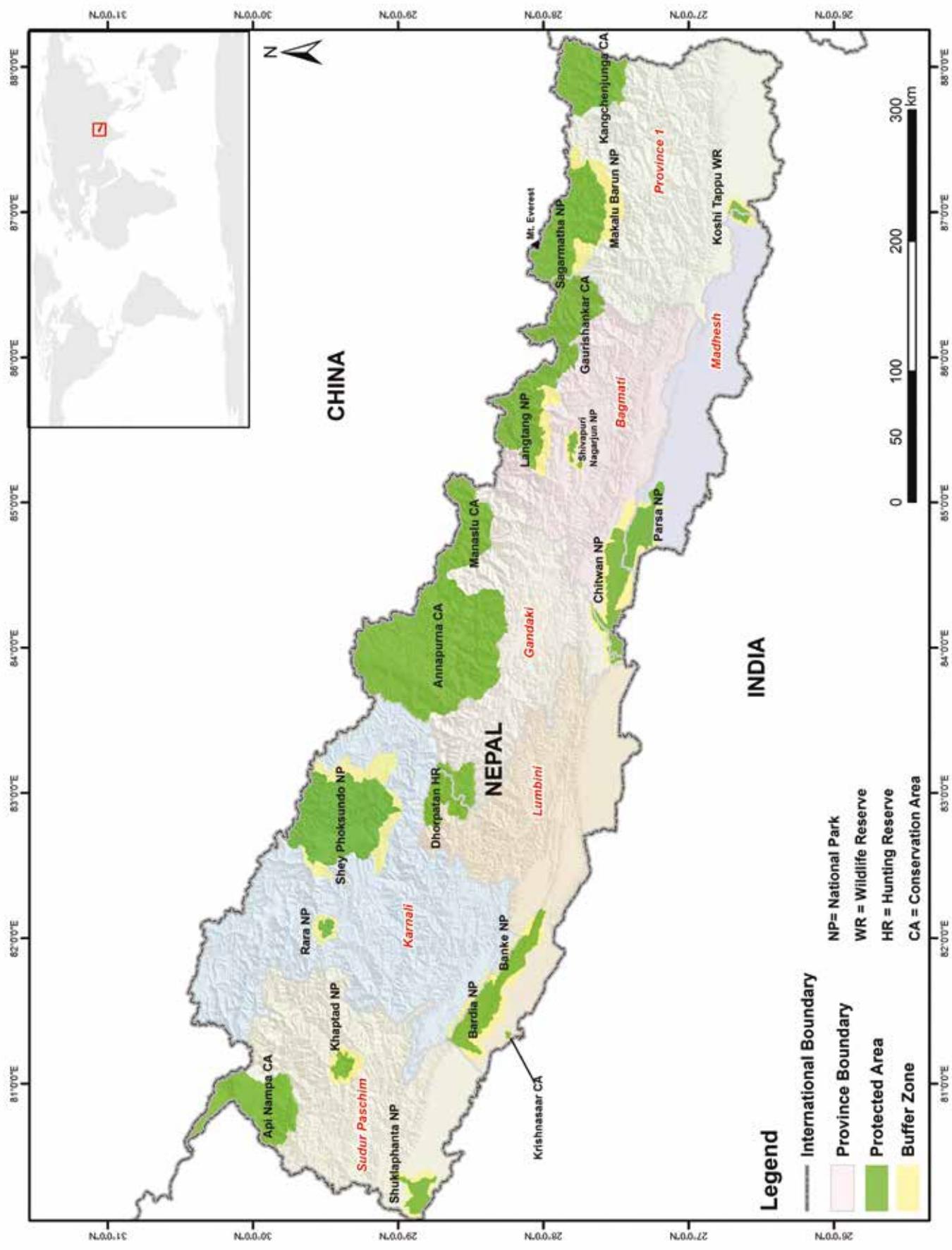
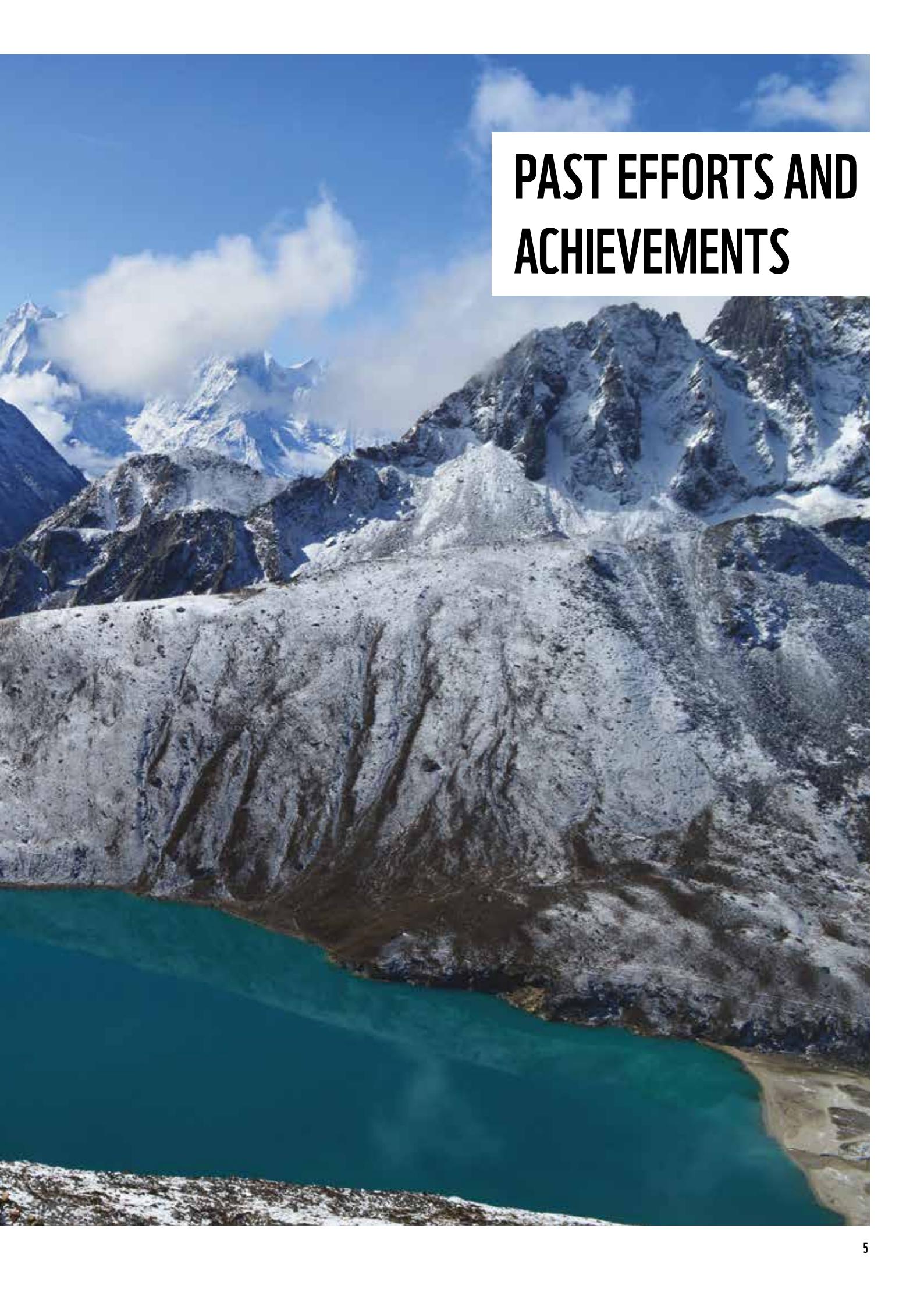


Fig. 1 Protected Areas of Nepal



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A wide-angle photograph of a mountainous landscape. In the foreground, a deep turquoise lake stretches across the frame. To the right, a large, rugged mountain peak is covered in patches of snow and dark rock. In the background, more snow-capped peaks rise against a bright blue sky with wispy white clouds.

# PAST EFFORTS AND ACHIEVEMENTS

Since the inception of PAs in the 1970s, DNPWC has fulfilled its mandates of conserving biodiversity, achieved national goals and international commitments, and secured an extensive network of PAs across the country. These include successful recovery of the populations of globally significant species and reforming policies and making necessary institutional arrangements to address emerging challenges.

The main efforts and achievements made over the last five decades of PAs management in Nepal are:

## **2.1. POLICY REFORM**

The DNPWC is guided by the National Parks and Wildlife Conservation Act (1973), CITES-Act to Regulate and Control International Trade in Endangered Wild Fauna and Flora (2017) and subsequent regulations. The Department has successfully leveraged enabling policies for mainstreaming biodiversity conservation. Later in the 1990s, the Department shifted its conservation approach from the strict mode of species conservation to ecosystem-based to participatory conservation approach declaring parks and reserves peripheral areas as buffer zones. In the early 2000s, the department adopted landscape-level conservation approach declaring Terai Arc Landscape (TAL) as Nepal's first conservation landscape. The integrated conservation and development model piloted in Annapurna Conservation Area is an exemplary participatory approach in conservation which was further consolidated in Kanchenjunga Conservation Area. The provision of relief funds to address human-wildlife conflict was introduced in 2010. Policy frameworks have been revised as needed to address contemporary conservation issues.

## **2.2 INSTITUTIONAL REFORM**

Protected area management in Nepal was initiated with the establishment of a Wildlife Section within the Department of Forest in 1973, and DNPWC was created in 1980. Since then, the DNPWC has been instrumental in establishing a network of 20 protected areas of different management modalities to cover nearly 24% of country's landmass. Currently, around two thousand staffs work under the department at various capacities.

## **2.3 SPECIES CONSERVATION**

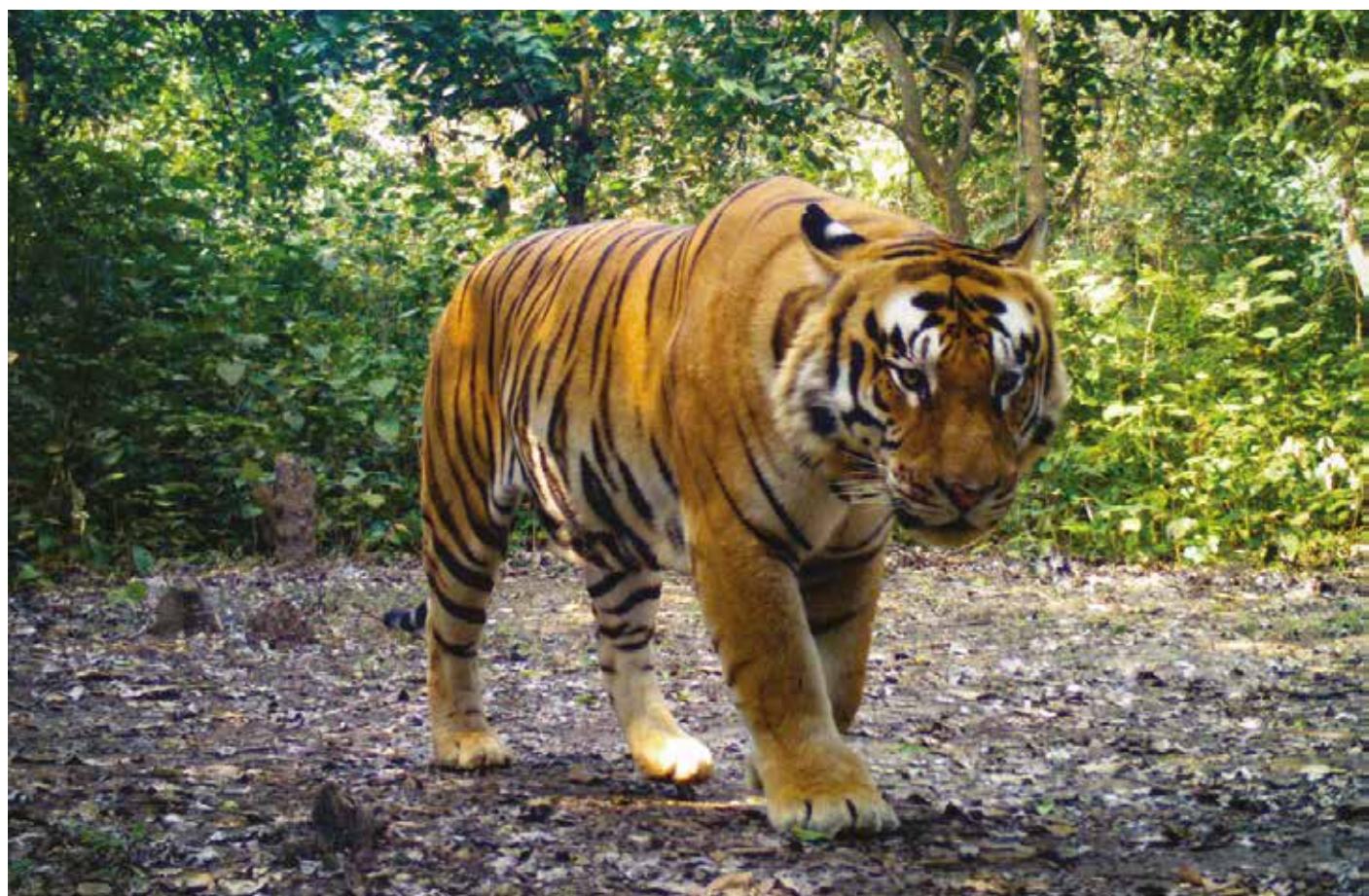
The department has achieved tremendous success in conserving wildlife resources. For example, the populations of key species such as tiger, greater one-horned rhinoceros, elephant, black buck, swamp deer, wild water buffalo, and gharial have recovered from the verge of extinction. The greater one-horned rhinoceros population has increased from approximately 100 individuals in early 1960s to 752 in 2021; the tiger population has increased from 121 individuals in 2009 to 355 in 2022; and elephant population increased from around 50 individuals in 1990s to 227 in 2020.

The department has also adopted ex-situ conservation approach to endangered species, such as elephant, gharial, and vulture. Species translocation has been one of the important activities in species conservation and range expansion of endangered species in Nepal. The Central Zoo also contributes for ex-situ conservation. Similar wildlife facilities can also be promoted at provincial and local levels to facilitate ex-situ conservation.

## 2.4 LAW ENFORCEMENT

The department has strong legal instruments (acts and regulations) for effective law enforcement. In addition, it has initiated several institutions - National Tiger Conservation Committee (NTCC), National Wildlife Crime Control Coordination Committee (NWCCCC), Wildlife Crime Control Bureau (WCCB), Community Based Anti-Poaching Unit (CBAPUs) etc.) and coordination mechanisms to combat wildlife crime engaging people at grassroots to the head of the government levels. The department also played a critical role in establishing inter-governmental institutions, such as SAWEN to combat wildlife crime at regional level.

The government has deputed Nepali Army for the park protection considering biodiversity conservation as one of the highest priorities. Nepal Police has created a dedicated wildlife pillar within their Central Investigation Bureau, and the Armed Police Force has also created a wildlife crime control unit to control wildlife crime along the international border. As a result of collective conservation efforts and effective law enforcement, Nepal celebrated zero poaching of greater one-horned rhinoceros, and the CITES Secretariate awarded a certificate of commendation for this achievement in 2014.





A photograph of a woman standing in a shallow, greenish-brown river, fishing with a large, circular, woven fishing net. She is wearing a patterned top and dark pants. The river is surrounded by dense green vegetation and reeds. A white rectangular box is overlaid on the top right corner of the image, containing the text.

# CHALLENGES AND OPPORTUNITIES



# CHALLENGES

In spite of significant conservation achievements over the last five decades, the department faces following major challenges in PA management and species conservation:

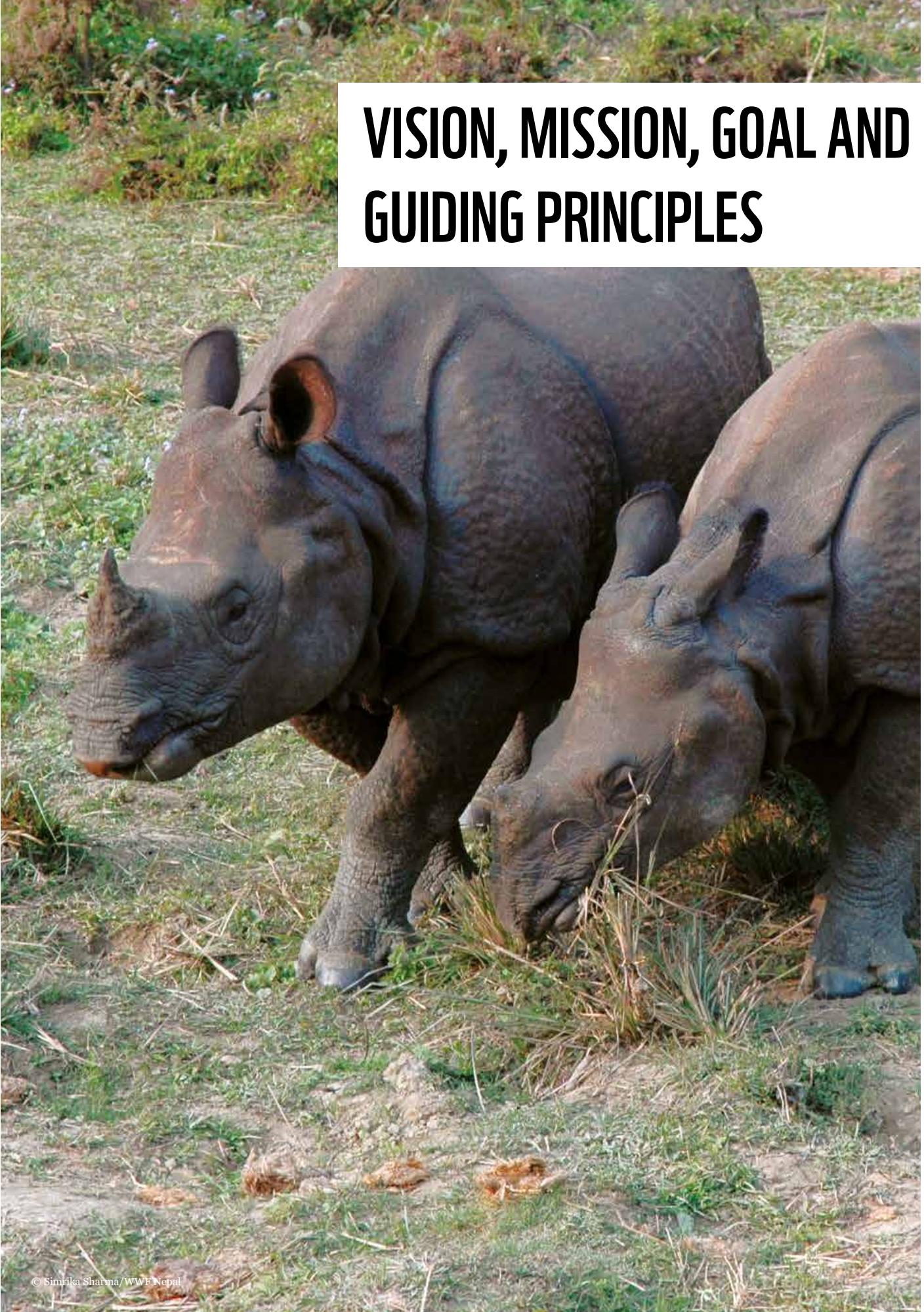
- Loss, degradation, and fragmentation of wildlife habitats
- Human-wildlife conflict
- Adverse impacts of climate change
- Controlling wildlife crime
- Management of invasive alien species and zoonotic diseases
- Balancing conservation and development
- Pollution

# OPPORTUNITIES

Despite challenges, the department has several opportunities to conserve country's unique biodiversity resources and PA management:

- Conservation at the landscape level
- Sustainable financing of the PA system
- Support of indigenous people and local communities
- Partnership/ Synergy with the local and provincial government
- Multi-stakeholder engagement
- Transborder cooperation and collaboration
- International cooperation and conservation diplomacy
- Ecotourism and private sector engagement
- Research and technology
- Contribution to Sustainable Development Goals (SDGs)





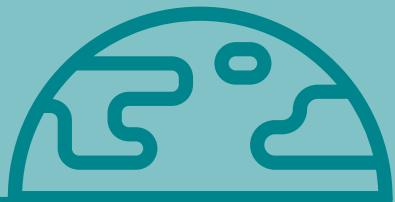
# **VISION, MISSION, GOAL AND GUIDING PRINCIPLES**

# VISION AND MISSION



**Living in harmony with nature: Conserve biological resources to ensure ecological functions, financially sustaining PA systems, and contribute to social wellbeing**

## GOAL



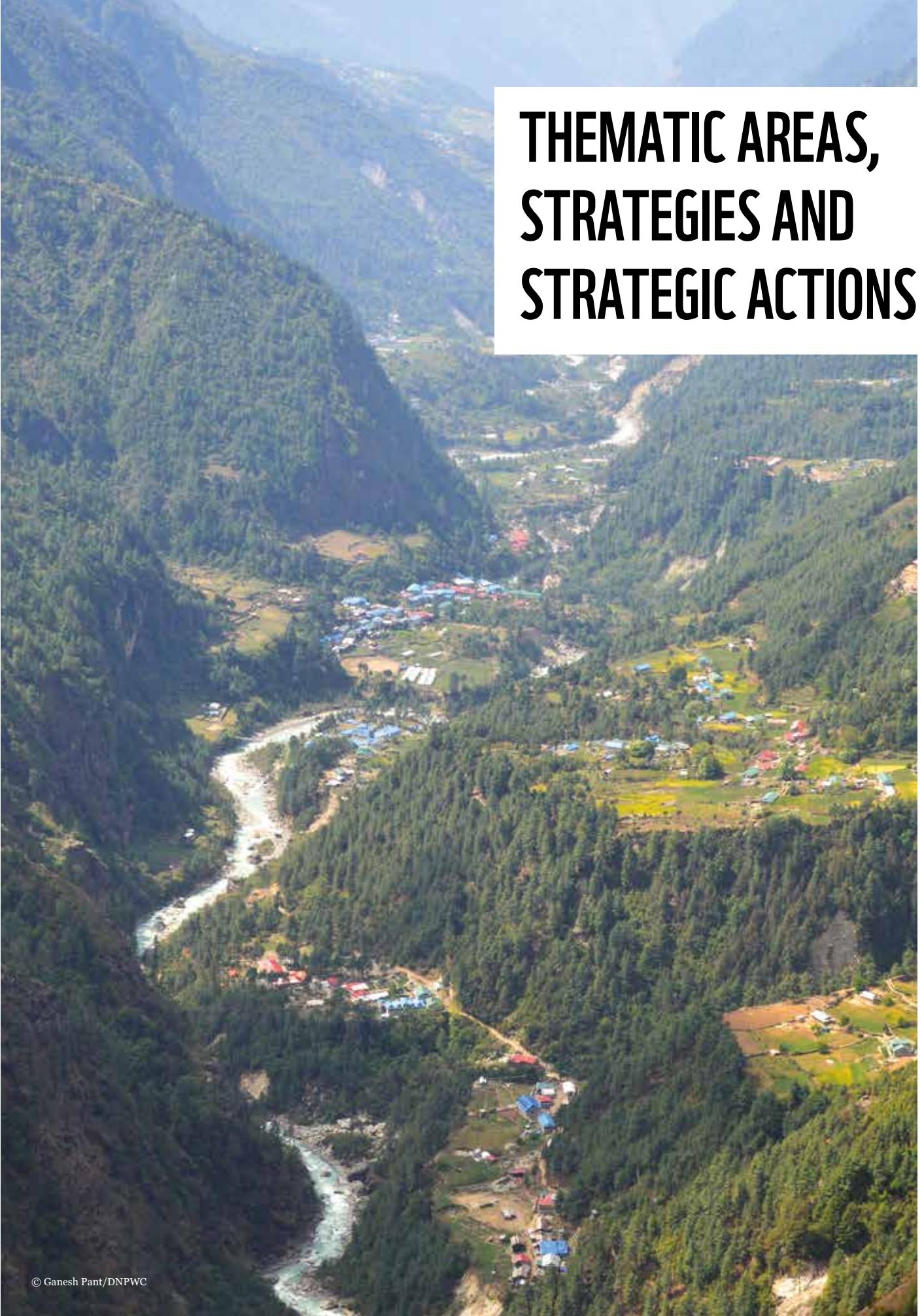
**Climate resilient ecosystems and self-sustaining protected area systems by 2030**

## GUIDING PRINCIPLES



**The guiding principles of this strategy are as follow:**

- Species-focused ecosystem approach
- Climate resilient and adaptive management
- Human-wildlife coexistence
- Balancing conservation and development needs
- Zero tolerance on wildlife crime
- Inclusive and good governance
- Sustainable financing mechanism
- Towards carbon neutrality



# **THEMATIC AREAS, STRATEGIES AND STRATEGIC ACTIONS**

# 5.1. KEY THEMATIC AREAS

This strategy has five key thematic areas and five cross-cutting themes



## 5.1.1 LANDSCAPES, PROTECTED AREAS, AND CORRIDORS

### Issues

- Under representation of ecosystems and important biodiversity areas in the protected area system
- Habitat loss and fragmentation due to large linear and non-linear infrastructures
- Forest area encroachment
- Lack of river basin framework for landscape-level conservation
- Inadequate coordination among three tiers of governments

### Strategies and strategic actions

- Undertake feasibility study to identify and map out important biodiversity areas and expand appropriate PA system to cover at least 30% of the country's land by 2030
- Coordinate with concerned line agencies to promote green, resilient, and inclusive infrastructure development (GRID)
- Review PA boundaries, develop land use plans, develop, and implement encroachment control action plan
- Develop river corridors to connect PA systems and other Biodiversity Important Areas (BIAs)
- Develop a coordination mechanism among the three tiers governments to discuss and agree on concurrent issues for landscape-level biodiversity conservation and revenue/benefit sharing mechanism



## 5.1.2 SPECIES AND HABITAT

### Issues

- Inadequate information on wild flora and fauna
- Small and isolated populations
- Management of large and long-ranging wildlife species
- Low priority for small mammals, birds, and herpetofauna
- Management of orphan and problematic wildlife species
- Habitat degradation due to invasive alien species
- Adverse impacts of climate change on wildlife habitats

### Strategies and strategic actions

- Collect and update information on wild flora and fauna
- Manage small and isolated wildlife species through a meta-population approach
- Improve and expand habitats including grasslands, wetlands, and rangelands
- Assess the status of small mammals and herpetofauna, and prepare conservation action plans
- Establish wildlife rescue centers, and ex-situ conservation facilities and strengthen the capacity of human resources
- Develop and implement invasive alien species control action plan
- Establish hydro-meteorological stations to monitor impacts of climate-induced risks
- Develop an early warning system in each PAs, prepare disaster risk reduction plan, and create climate refugia



## 5.1.3 LAW ENFORCEMENT

### Issues

- Poaching and illegal trade of wildlife and its derivatives
- Retaliatory killing of wildlife species
- Inadequate coordination among law enforcement agencies
- Trans-national nature of wildlife crime

### Strategies and strategic actions

- Strengthen capacity and skills of frontline staff, and use cutting-edge technology
- Strengthen the capacity of law enforcement agencies for information and intelligence management
- Aware and sensitize local communities and incentivize through appropriate mechanisms
- Strengthen coordination mechanism among law enforcement agencies and institutions
- Institutionalize and strengthen trans-border cooperation, and functionalize SAWEN to foster regional cooperation



## 5.1.4 HUMAN-WILDLIFE CO-EXISTENCE

### Issues

- Dependency of poor and marginalized communities on park resources
- Wildlife intrusion into farmlands and settlements
- Inadequate relief support for wildlife damage
- Inadequate capacity to respond to Human Wildlife Conflict (HWC)

### Strategies and strategic actions

- Develop and implement site specific HWC management action plans
- Implement alternative livelihood improvement activities targeted for poor and marginalized communities
- Expand and improve habitats, and promote wildlife-friendly physical barriers to control wildlife intrusion into human settlements while ensuring barrier risk to dispersal of wildlife
- Revise existing HWC relief guidelines to increase relief support and simplify the process
- Strengthen the capacity of frontline staffs to respond to HWC



## 5.1.5 LIVELIHOOD, TOURISM AND GREEN ECONOMY

### Issues

- Inequal sharing of conservation benefits
- Limited livelihood opportunities for poor and marginalized communities
- Inadequate tourism infrastructures, other facilities and services
- Limited private sector engagement in conservation and development
- Lack of Payment for Environmental Services (PES) mechanism

### Strategies and strategic actions

- Develop a mechanism to ensure access to conservation benefits for poor and marginalized communities
- Promote adequate alternative livelihood opportunities for targeted communities
- Enhance private sector engagement to promote nature-based tourism facilities and services
- Institutionalize the PES mechanism to access benefits from PA resources, such as water and carbon trade
- Develop an action plan to declare carbon neutral PA

# 5.2 CROSS-CUTTING AREAS, STRATEGIES AND STRATEGIC ACTIONS



## 5.2.1 RESEARCH, MONITORING AND KNOWLEDGE MANAGEMENT

### Issues

- Limited information and database
- Inadequate capacity and facilities
- Limited engagement of academic institutions and other stakeholders

### Strategies and strategic actions

- Analyze research needs and gaps, and prioritize research areas
- Create PA data system
- Strengthen the capacity of DNPWC staff in research and monitoring
- Enhance collaboration with academic institutions and other stakeholders for priority research activities



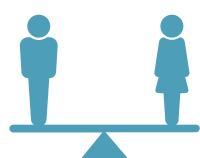
## 5.2.2. CLIMATE CHANGE

### Issues

- Inadequate knowledge of climate change impacts and limited information on climatic variables
- Inadequate funding for research and technology; and adaptation and mitigation measures

### Strategies and strategic actions

- Generate information on climatic variables, climate change impacts, risks, and vulnerabilities for integration in PA management
- Collaborate with academic and research institutions and conservation partners
- Develop climate smart species conservation action plans
- Conduct periodic carbon inventory and designate carbon neutral protected areas



## 5.2.3 GENDER EQUALITY AND SOCIAL INCLUSION

### Issues

- Inadequate safeguard mechanism in the workplace
- Inadequate representation of women, indigenous people, and marginalized groups

### Strategies and strategic actions

- Mainstream GESI in PA management and biodiversity conservation
- Ensure GESI sensitive budget and programs
- Increase meaningful participation of women, indigenous people, and marginalized people at all levels
- Ensure access and equitable benefit sharing mechanism to local communities



## 5.2.4 INSTITUTIONAL DEVELOPMENT

### Issues

- High turnover of frontline staff
- Poor PA infrastructures and facilities
- Inadequate capacity of Buffer Zone (BZ) institutions

### Strategy and strategic actions

- Develop special incentive packages for frontline staff
- Develop climate smart PA infrastructures, including all weather roads
- Reform BZ institutions and mechanism to address emerging challenges



## 5.2.5 COMMUNICATION AND OUTREACH

### Issues

- Limited access to communication means
- Limited showcasing of key achievements, best practices, and learnings

### Strategies and strategic actions

- Establish an effective communication mechanism within and among PAs
- Develop adequate communication and outreach materials
- Coordinate with service providers for media outreach
- Encourage frontline staff to develop conservation stories on best practices
- Engage schools and academic institutions



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# IMPLEMENTATION ARRANGEMENTS



© Ganesh Pant/DNPWC



## 6.1 INSTITUTIONAL ARRANGEMENTS

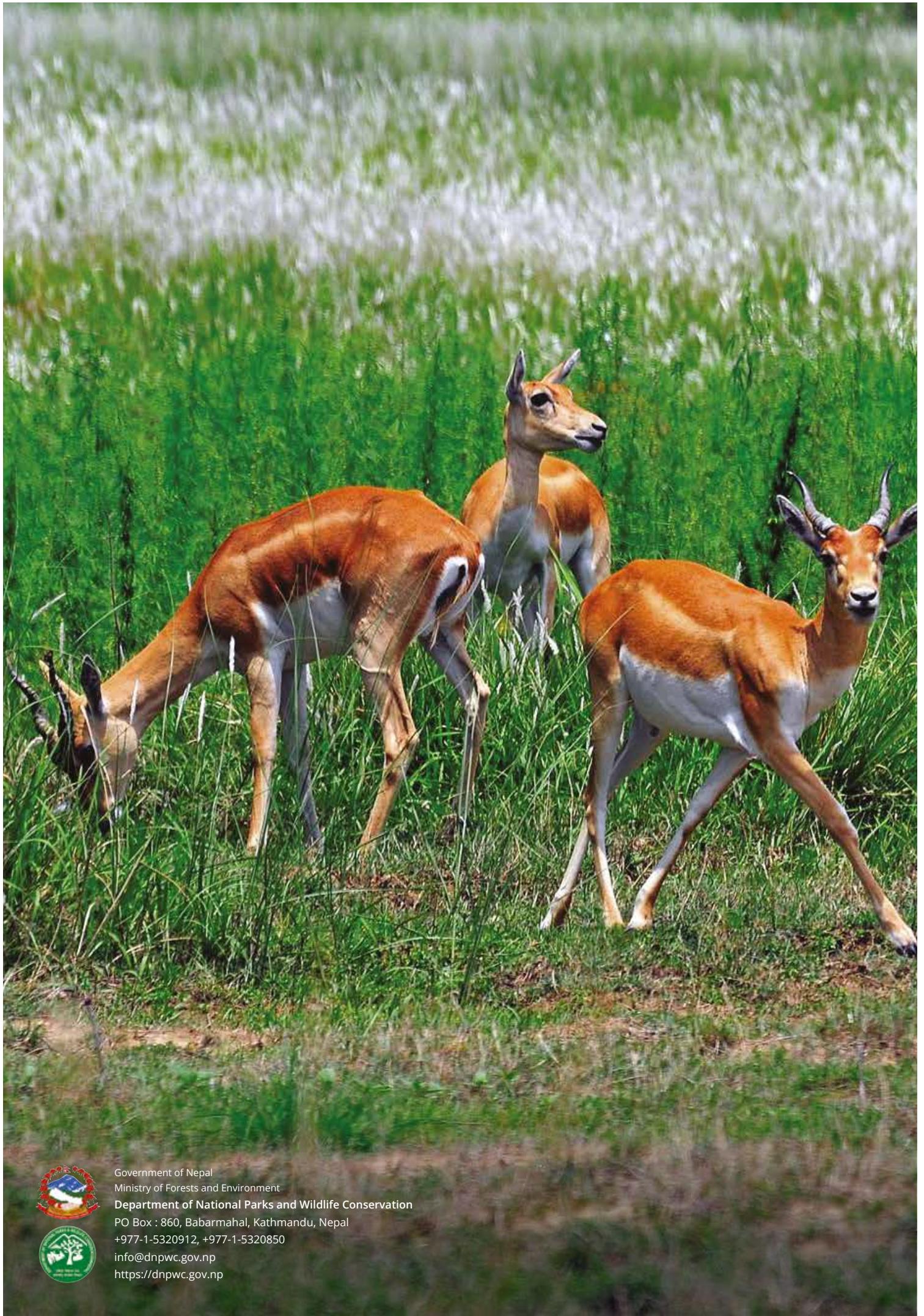
- Organization and management survey (O&M) of PAs
- Strengthen joint operation and monitoring with Nepali Army
- Coordinate with line agencies including provincial and local governments
- Develop coordination mechanisms with non-government organizations and private sectors
- Ensure digital governance

## 6.2 SUSTAINABLE FINANCING MECHANISM

- Coordinate with line Ministries to leverage additional funding
- Periodic revision of PA royalties and explore other financial sources, including carbon credit, wildlife premium, wildlife farming, wildlife hunting, and concessionaires' fees
- Promote PES mechanism
- Explore new funding opportunities, including GEF, GCF, Least Developed Countries Fund (LDCF), and adaptation fund
- Continue collaboration with conservation partners, bilateral and multilateral agencies
- Operationalize the CITES fund and establish National Park Fund using resources generated from PA land use compensation for development projects

## 6.3 MONITORING AND EVALUATION

- Periodic monitoring of strategic actions, milestones, and outcomes
- Mid-term review and evaluation in 2026
- Final evaluation and reporting in 2030



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