



ANNUAL REPORT

2022



National Trust for Nature Conservation



NTNC

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NTNC Projects: ACAP, BCC, BCP, Central Zoo, MCAP, SCP, GCAP, KCC

Cover photo: Problem tiger rescue in Bardia National Park, © NTNC/BCP

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FOREWORD

With the covid crisis tapering off, a sense of positive reckoning seems to be coming about the natural world. There has been a wider acknowledging that the very interconnected nature of global modern environments and economies call for improved individual responsibility and collective actions. A stronger urgency to combat the magnitude of the climate crisis, which is evidently the biggest challenge of our times, coupled by the need to protect, restore and heal the planet, is being increasingly recognized.

Despite its own set of challenges, Nepal has made noteworthy progress to conserve the rich natural and cultural heritage it is home to. Together with efforts from a wide range of stakeholders, NTNC continues to make significant contributions to the country's remarkable success in species and landscape-level conservation, advancing science and community-based conservation approaches, building local-to-global partnerships for nature, and delivering on sustainability-led outcomes.

In our mission to ensure that biodiversity conservation delivers significantly to Nepal's sustainability and prosperity agenda, important conservation milestones were reached this year. Amongst these, the fourth national tiger survey was completed with remarkable results – an outcome of years of uncompromising efforts, right from the top leadership to the local level, to expand wildlife habitats, prey base and ecosystem benefits for the apex species that the tiger is.

New initiatives to advance species-level research, monitoring and habitat management and protection for other threatened species like rhinos, elephants, snow leopards, large prey and herbivores, among other mammals, reptiles, herpetofauna and birds were undertaken. Special efforts for building human-wildlife coexistence capacities, through improved measures for wildlife protection, developing wildlife-friendly community behaviors and safeguarding human lives and livelihoods, were made.

NTNC established its newest project facility this year, the Koshi Tappu Conservation Centre (NTNC-KCC), focusing on extending our much needed conservation support in eastern Nepal, a region with tremendous potential for harmonizing wildlife-community relations.

As a uniquely specialized institution for wildlife rescue and rehabilitation, we provide regular frontline support to government and local communities for problem animal rescue and management.

We continued to prioritize and enhance community leadership and governance delivery in protected area management. Our investments for powering green growth and community resiliency, through improved socio-economic opportunities for protected area communities, from nature-based tourism to green enterprise and skills-based opportunities, delivers invaluable benefits at household levels to whole communities. As a GCF-accredited entity, we are moving forward on building new collaborative projects vital for enhancing the resilience of vulnerable communities and ecosystems.

Being a primary conservation partner of the Government of Nepal, NTNC continues to promote conservation science and community-led approaches on the ground. Together with our national and international partners, our actions for biodiversity, planet and people, affect critical ecosystems and protected area communities on a day to day basis. Our scientists support policy makers at home, while adding to the body of knowledge of the global scientific community.

As a reader, I hope this report is able to give you a sense of the Trust's priorities and efforts. I would like to thank all those who work in one way or another for nature. Special appreciation must be given to all our staffs, NTNC's Governing Board of Trustees, our partners in government, particularly the Ministry of Forests and Environment, the Department of National Parks and Wildlife Conservation, the Department of Forests and Soil Conservation, security personnel from the Nepal Army and Nepal Police, our conservation partners and donors at home and abroad, including the many protected area communities and people, all of whom make daily efforts to mainstream nature conservation for Nepal's prosperity. We remain committed and resolute to do more.



Sharad Chandra Adhikari
Member Secretary

ACRONYMS

ACA/P	Annapurna Conservation Area/Project	DWS	Drinking Water System
AEPC	Alternative Energy Promotion Center	EBC	Elephant Breeding Center
APF	Armed Police Force	EEHV	Elephant Endotheliotropic Herpes Virus
APU	Anti-poaching Unit	EIA	Environmental Impact Assessment
BaNP	Banke National Park	EMMP	Environmental Monitoring and Management Plan
BCA	Blackbuck Conservation Area	FMD	Foot and Mouth Disease
BCC	Biodiversity Conservation Center	FMSC	Forest Management Subcommittee
BCF	Barandabhar Corridor Forest	FoZ	Friends of Zoo
BCN	Bird Conservation Nepal	FY	Fiscal Year
BCP	Bardia Conservation Program	GBC	Gharial Breeding Center
BNP	Bardia National Park	GBV	Gender Based Violence
BZ	Buffer Zone	GCA/P	Gaurishankar Conservation Area/Project
BZCF	Buffer Zone Community Forest	GESI	Gender and Social Inclusion
BZCFUG	Buffer Zone Community Forest User Group	GFC	Green Force Club
BZMC	Buffer Zone Management Committee	GoN	Government of Nepal
BZUC	Buffer Zone Users Committee	GPS	Global Positioning System
CAMC	Conservation Area Management Committee	HDPE	High Density Polyethylene
CAMOP	Conservation Area Management Operation Plan	HH	Household
CAPA	Community Adaptation Plan of Action	HMsC	Homestay Management Subcommittee
CBAPU	Community Based Anti-poaching Unit	HTC	Himalayan Tiger Foundation
CDV	Canine Distemper Virus	HWC	Human Wildlife Conflict
CE	Conservation Education	I/NGO	International/Non-Government Organization
CF	Community Forest	ICDP	Integrated Conservation and Development Program
CFOP	Community Forest Operational Plan	IDA	International Development Assistance
CFUG	Community Forest Users Group	IEE	Initial Environmental Examination
CGI	Corrugated Galvanized Iron	IGA	Income Generation Activities
CHAL	Chitwan-Annapurna Landscape	IUCN	International Union for Conservation of Nature
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora	IWT	Illegal Wildlife Trade
CNP	Chitwan National Park	KCC	Koshi Conservation Center
DAE	Direct Access Entity	KrCA	Krishnasar Conservation Area
DAO	District Administration Office	KTWR	Koshi Tappu Wildlife Reserve
DCC	District Coordination Committee	KTK-Belt	Koshi Tappu Kanchenjunga Biodiversity Education Livelihood Terra Studio
DFO	Division Forest Office	LHW	Livestock Health Worker
DNA	Deoxyribonucleic Acid	M/ICS	Metallic/Improved Cooking Stove
DNPWC	Department of National Parks and Wildlife Conservation	MCA/P	Manaslu Conservation Area/Project
DoF	Department of Forests and Soil Conservation	MITFE	Ministry of Industry, Tourism, Forest and Environment

MoFE	Ministry of Forests and Environment
MSFP	Multi-stakeholder Forestry Program
NA	Nepal Army
NORPART	Norwegian Partnership Programme for Global Academic Cooperation
NTB	Nepal Tourism Board
NTFP	Non-Timber Forest Product
NTNC	National Trust for Nature Conservation
OPD	Outpatient Department
PA	Protected Area
PCR	Polymerase Chain Reaction
PNP	Parsa National Park
PV	Photovoltaic
PVC	Poly Vinyl Chloride
RM	Rural Municipality
RRT	Rapid Response Team
SAWEN	South Asia Wildlife Enforcement Network

SCP	Shuklaphanta Conservation Program
SDW	Safe Drinking Water
ShNP	Shuklaphanta National Park
SLC	Snow Leopard Conservancy
SLCSC	Snow Leopard Conservation Subcommittee
SMART	Spatial Monitoring and Reporting Tool
TAAN	Trekking Agencies' Association of Nepal
TAL	Tarai Arc Landscape
TAR	Tibetan Autonomous Region
TMSC	Tourism Management Subcommittee
TX2	Tiger Doubling Goal by 2022
UC	Users Committee
UCO	Unit Conservation Office
USAID	United States Agency of International Development
USFWS	United States Fish and Wildlife Service
VCBC	Vulture Conservation and Breeding Center
WWF	World Wildlife Fund for Nature
ZSL	Zoological Society of London

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ABOUT NTNC PROJECTS

MOUNTAINS

ANNAPURNA CONSERVATION AREA PROJECT (ACAP)

Launched in 1986, the Annapurna Conservation Area Project (ACAP) is the largest undertaking of NTNC. ACA is also the first 'Conservation Area' and largest 'Protected Area' in Nepal covering an area of 7,629 sq. km. It covers 5 districts and includes 15 rural municipalities. Together with its remarkable biodiversity, with 1,352 plants, 128 mammals, 518 birds, 40 reptiles and 23 amphibians species, it is also home to some of the most well-known mountains in Nepal where diverse cultures and peoples reside. This makes it an area of high eco-system sensitivity and the country's top trekking destination. It is here where NTNC pioneered the ICDP model which integrates biodiversity conservation and sustainable development through maximizing community engagement, ownership and opportunity.

MANASLU CONSERVATION AREA PROJECT (MCAP)

Manaslu Conservation Area (MCA), declared on December 28, 1998 is the second conservation area to come under NTNC management. MCA encompasses an area of 1,663 sq. km. of Tsumnubri Rural Municipality, with all its seven wards except Sirdibas adjoining the Tibetan Autonomous Region of China. Located in the northern part of the Gorkha District, the area is made up of two major mountain valleys—Tsum in the east and Nubri in the west. Ecologically, MCA is home to a diverse range of rare flora and fauna, also serving as a healthy habitat for the snow leopard and its prey. Socio-culturally people are of Tibetan origin who follow Buddhism, observing a profound sense of wildlife compassion, notably in Tsum valley. With far-flung communities living in pristine wilderness, NTNC has replicated the successful ICDP model of ACA in MCA.

GAURISHANKAR CONSERVATION AREA PROJECT (GCAP)

Gaurishankar Conservation Area (GCA), declared on January 11, 2010 is the third conservation area under NTNC management. GCA covers an area of 2,179 sq. km. encompassing two municipalities and eight rural municipalities in three districts, namely, Sindhupalchok, Dolakha and Ramechhap. The area serves as a biological corridor connecting two crucial protected areas of the country, Sagarmatha National Park and Langtang National Park. Together with its interesting faunal diversity, the area is home to 695 types of floral species and 16 major vegetation types. The region is rich in water resources and is the catchment of Khimti, Bhotekoshi, Sunkoshi, and Tamakoshi rivers that are major water sources for large hydropower projects in the country. To sustainably manage the richly resourced area NTNC has replicated the success of its ICDP model in GCA also.

KATHMANDU VALLEY

CENTRAL ZOO

The Central Zoo, located in Jawalakhel, Lalitpur is the oldest zoo in Nepal, its origination dating back to 1932 as a private collection of late Rana Prime Minister Juddha Shumser JBR. After it came under the Government of Nepal in 1956, its management was eventually entrusted to NTNC in 1995. Covering an area of 6 ha, today, the zoo houses more than 1100 animals of 112 different species of mammals, birds, reptiles and fish. The zoo is a centre for recreation, conservation education and wildlife research. Already more than 100,000 students from more than 300 schools inside Kathmandu Valley are a part of our Friends of Zoo (FoZ) membership-based conservation education programme. Today the zoo has also become a focal point for rescue, rehabilitation and treatment of wild animals from in and round Kathmandu Valley, and it continues to promote animal welfare, conservation learning and environmental activism among all sections of the society.

Tarai

BIODIVERSITY CONSERVATION CENTRE (BCC)

Biodiversity Conservation Center (BCC), formerly known as Nepal Conservation Research and Training Center (NCRTC), was established in 1989 to conduct biological research and monitoring in the lowland (Tarai) protected areas of Nepal. BCC is among the largest and oldest undertaking of NTNC, and over time, it has been at the forefront of Nepal's milestone achievements in conservation—increase in threatened and endangered wildlife species such as Royal Bengal tiger, Greater one-horned rhinoceros, Asian elephant; restoration of wildlife habitats and key biological corridors; and significant increase in participation of local communities in conservation. Although the centre's services extend across Nepal, it's support presently concentrates on providing technical proficiency to Chitwan National Park, Parsa National park and Koshi Tappu Wildlife Reserve for wildlife management activities like wildlife translocation, survey of flagship species, ecological research within and outside the park, among others.

BARDIA CONSERVATION PROGRAMME (BCP)

NTNC started engaging in Bardia National Park in 1986 to monitor the first batch of translocated rhinoceros from Chitwan National Park. Subsequently, Bardia Conservation Programme (BCP) was launched in 1994 as a regular project of NTNC focusing on biodiversity research and sustainable community development in the western lowlands. Its role particularly in wildlife research and monitoring, habitat and corridor restoration, and capacitating local institutions have been key for the increase of endangered wildlife species. Today the Barida-Banke complex is seen to have the highest density of the Royal Bengal tiger among Nepal's protected areas today. BCP works mainly in three protected areas: Bardia National Park and its buffer zone, Banke National Park and its buffer zone, and Blackbuck Conservation Area (BCA); including biological corridors of Khata, Karnali, and Kamdi, and adjoining community forests.

SHUKLAPHANTA CONSERVATION PROGRAMME (SCP)

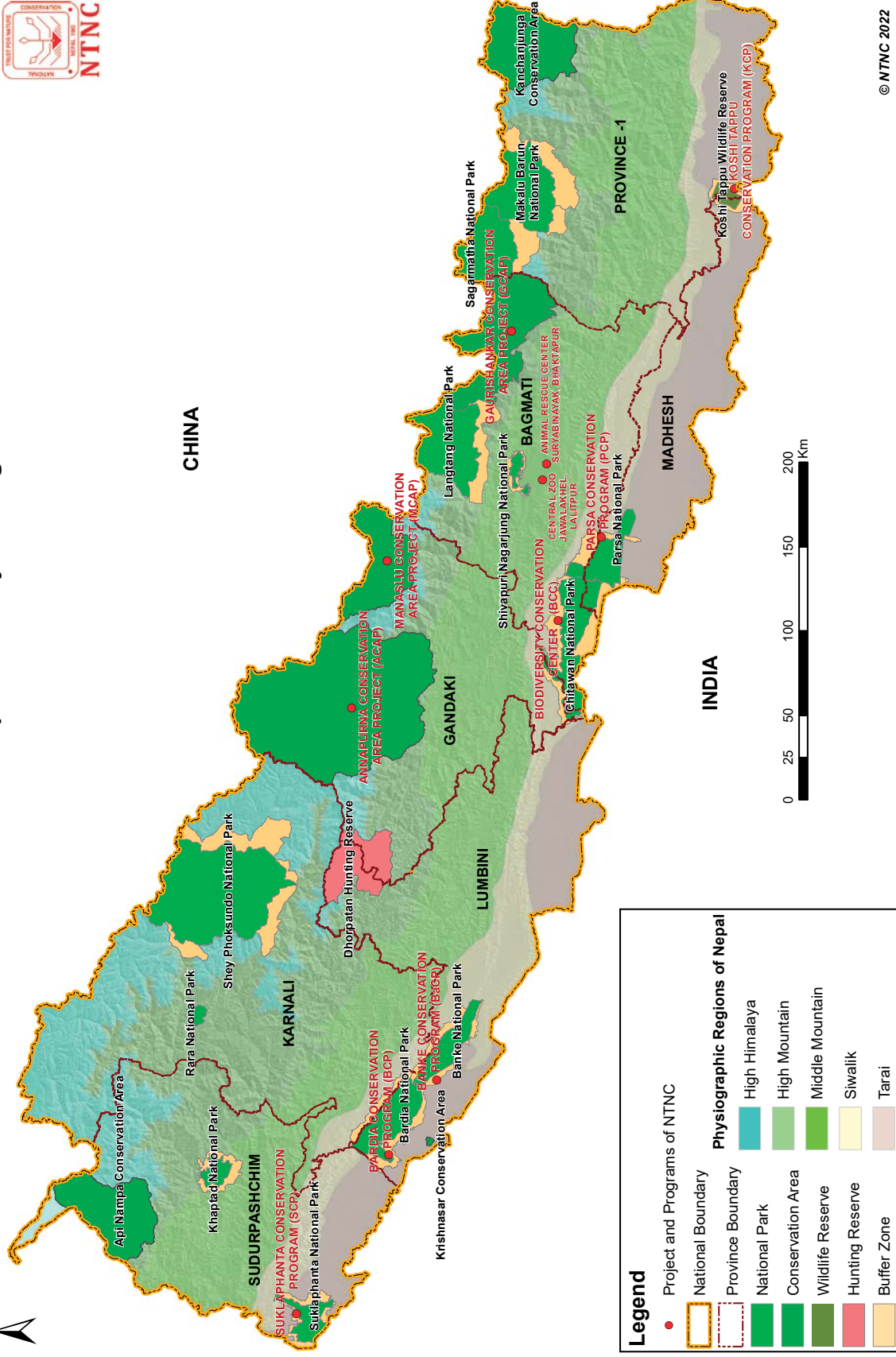
NTNC started its conservation in the Shuklaphanta National Park (ShNP) in 1999, mainly focusing on biodiversity conservation along with research and monitoring. SCP's main objective is to safeguard endangered wildlife species and their habitats in and around ShNP, and to improve the livelihood of marginalized communities around the park premises. The park is known to have the biggest patch of continuous grassland in Nepal and holds the largest herd of swamp deer in Asia. Serving as a remarkable space for rhinos, tigers, leopards, and other prey species, together with the unique indigenous cultures, ShNP represents the glory of far western Nepal. SCP's programmes are focused in Shuklaphanta National Park (ShNP) and its buffer zone along with the Laljhadi and Branhadev Corridors.

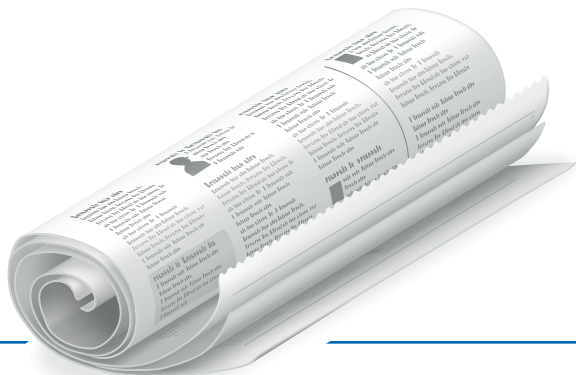
KOSHI CONSERVATION CENTER (KCC)

Koshi Conservation Center (KCC) is NTNC's eight and most recent project under operation. It was set up as independent project officially from September 2021. Prior to that, the Trust's Koshi-related operations were managed from its Biodiversity Conservation Center (NTNC-BCC) office in Sauraha, Chitwan. A dedicated project focusing on Koshi Tappu region now ensures NTNC's physical presence across all the protected areas in the Tarai region of Nepal, extending much necessary conservation support into eastern Nepal, where human-elephant conflict are the severest in the country. The project is meant to support the Department of National Parks and Wildlife Conservation (DNPWC) and local communities enhance the conservation value of Koshi Tappu Wildlife Reserve (KTWR)—a 175 square kilometre protected area situated in the Saptakoshi River plain of south-eastern Nepal that serves as a prime habitat for diverse wildlife and wetland ecosystems.



Protected Areas of Nepal and Project/Programs of NTNC





Newsline

Historical day for tiger conservation: Nepal officially becomes first country to double its tiger population

Up from 121 tigers to 355 tigers in the past twelve years, Nepal officially became the first of 13 tiger-range countries to fulfil its doubling-the-tiger (TX2) mission following the St. Petersburg Declaration in 2010. The fourth national tiger survey results were made public by the Prime Minister of Nepal, the Rt. Hon'ble Sher Bahadur Deuba, at the Global Tiger Day 2022 celebrations held amidst a national-level celebrations in Kathmandu.

The fourth national tiger survey was carried out between December 2021 and April 2022 under the leadership of the Department of National Parks and Wildlife Conservation (DNPWC) and Department of Forest and Soil Conservation (DFSC), in partnership with NTNC, ZSL Nepal and WWF Nepal.

The first, second and third nationwide tiger assessments carried out in 2009, 2013, 2018 with tiger populations estimates at 121, 198, and 235 respectively.



<https://www.ntnc.org.np/publication/status-tigers-and-prey-nepal-2022>



The latest results, which well surpassed its target, growing almost 3X, is a reflection of the impressive state of nature conservation in Nepal. Continuing what is already working well, future priorities will be on building human-tiger coexistence capacities, improved tiger habitat management and movement, ensuring healthy prey base levels, enhancing livelihoods and promoting tiger-friendly behaviors among forest-dependent communities.

NTNC-Koshi Conservation Centre (KCC) established in Koshi Tappu Wildlife Reserve

The Koshi Conservation Centre (NTNC-KCC) was officially established as NTNC's newest project office in eastern Nepal this fiscal year. An event to mark the inauguration was done by the then Minister for Law Justice and Parliamentary Affairs Mr. Gyanendra Bahadur Karki together with the NTNC Chairman Dr. Krishna Prasad Oli, among more than 300 local community leaders, representatives and conservation stakeholders.

The new project is meant to support the Department of National Parks and Wildlife Conservation (DNPWC) enhance the conservation value of Koshi



Tappu Wildlife Reserve (KTWR)—a 175 square kilometre protected area situated in the Saptakoshi River plain of south-eastern Nepal that serves as a prime wetland habitat for rare and endangered wildlife like wild water buffalo (*Bubalus arnee*), Bengal florican (*Houbaropsis bengalensis*), Gangetic dolphin (*Platanista gangetica*) and Fishing cat (*Prionailurus viverrinus*).

Going forward, a dedicated project office will ensure that NTNC maintains an active presence across all the protected areas in the Tarai region of Nepal, extending its much necessary conservation support into eastern Nepal, where human-elephant conflict are some of the most severest in the country.

Green Climate Fund: Gandaki River Basin Project Inception

Building from the previous year, the GCF funded project 'Improving climate resilience of vulnerable communities and ecosystems in the Gandaki River Basin, Nepal' has moved toward the implementation phase. To this end, a national project inception workshop involving stakeholders from government, civil society organizations, private sector, academia, and the media, was organized in Kathmandu on July 08 2022. IUCN is an implementing entity for the project, with the Ministry of Forests and Environment, Department of Forests and Soil Conservation, and NTNC as executing entities.

The project will focus on enhancing the climate resilience of vulnerable communities and ecosystems in the 19 districts of the Gandaki River Basin, which is a grouping of areas highly vulnerable to the impacts of climate change. The project has three major components, Community resilience, Ecosystem resilience, and Climate governance. The total project cost is USD 32.715 million, with GCF providing USD 27.4 million in grant, and the remainder in co-financing from the Ministry of Forests and Environment, NTNC, and IUCN Nepal.

NTNC tasked with 'Chure-Tarai Madhesh Conservation and Management Master Plan Revision'

NTNC and the President Chure-Tarai Madhesh Conservation Development Board (Chure Board) signed an agreement for the preparation of the 'Chure-Tarai Madhesh Conservation and Management Master Plan Revision' on December 23, 2021. It was signed at the NTNC central office between the member secretaries of the two institutions—Mr. Sharad Chandra Adhikary from NTNC, and Dr. Maheshwar Dhakal from the Chure Board—in the presence of the NTNC Chairman Dr. Krishna Prasad Oli and board members of the Chure Board.

The agreement would require NTNC to review and revise the existing 20-year Chure-Tarai Madhesh Conservation and Management Master Plan (BS 2074), which is to be undertaken every five years based on the relevance, effectiveness, efficiency, impact and sustainability by incorporating current issues and priorities. Some of the new components in the revised five-year master plan will look to better address the severity of global climate change on the Chure-Tarai Madhesh area, where fire hazards, landslides, floods have significantly increased in recent years; impacts of infrastructure expansion caused by increasing population, urbanization and development activity in the Chure region; long-term issues related to uncontrolled and unsustainable use of natural resources, like the extraction of sand, gravel, stone from the area; including accelerating land encroachment, human-wildlife conflict, and environmental injustices.



On July 08, 2022, a national sharing workshop was jointly organized by the Chure Board and NTNC to discuss proceedings, collect feedbacks and incorporate inputs before the finalization of the revised master plan that NTNC was tasked to complete. Among wide stakeholder participation, the event was also attended by the Hon. Minister for Forests and Environment, Mr. Pradeep Yadav, the MOFE Secretary Dr. Pem Narayan Kandel, the Chairman of NTNC Dr. Krishna Prasad Oli, and the Chairman of the Chure Board Dr. Kiran Poudyal.

New bird species for Nepal recorded in Annapurna Conservation Area

NTNC recorded a new bird species, the European Roller (*Coracias garrulous*), for the first time in Nepal. The new species was recorded in Upper Mustang of the Annapurna Conservation Area in Kekighan, Lomanthang Rural Municipality, Ward Number 5, at an altitude of 3781 metres. Mr Ram Bahadur Gurung of ACAP-Lomanthang first photographed the bird on August 29, 2022. A second sighting was recorded again two days later, following which NTNC initiated the verification process. Identification of the new bird species was later confirmed by well-known ornithologists both at home and abroad. With the latest addition, the Annapurna Conservation Area now has a total record of 519 bird species.



3rd Asian Elephant range states meeting in Kathmandu

Authorities of Asian Elephant range states of 13 countries met in Kathmandu for three days to discuss country-wise experiences and initiatives, common issues and visions, and pursue future priorities and actions for the conservation of the Asian Elephant, the largest terrestrial animal in Asia. Delegates from Bhutan, Bangladesh, Cambodia, China, India, Indonesia, Laos, Nepal,

Sri Lanka, Myanmar, Malaysia, Thailand, and Vietnam took part in the event that was conducted both in person and online. Official opening of the event was done by the Hon. Minister for Forests and Environment of Nepal, Mr. Ramsahay Prasad Yadav, together with the MOFE Secretary Dr. Pem Narayan Kandel, and NTNC Chairman Dr. Krishna Prasad Oli. The meeting concluded on April 29, 2022 with the "The Kathmandu Declaration for Asian Elephant Conservation", which spoke of a common vision to strengthen Asian elephant conservation and synergize national actions through bilateral and multilateral cooperation amongst the range states, build coexistence capacities and community benefits from elephant conservation, and agree on priority commitments by 2025.

Chimpanzee house opens at Central Zoo

After nearly five years since Champa and Chimipu were rescued by Nepali authorities from wildlife traffickers and brought to the Central Zoo for caring, finally this year a new Chimpanzee house was constructed for the chimpanzee pair. Inauguration of the facility was done on Earth Day by the Secretary



of the Ministry of Forests and Environment Dr. Pem Narayan Kandel, together with the NTNC Member Secretary Mr. Sharad Chandra Adhikari, amidst a mass function.

Designed following intricate detail, the chimpanzee house covers an area of 4,140 sq. ft. with three rooms and an outdoor garden. Rooms are equipped with four air conditioners and have wooden flooring keeping in mind temperature requirements. The holding area is equipped with toughened glass that allows for favorable visitor viewing, and the facility is enriched with extra amenities like swings, poles and activity platforms to enable healthy physical and mental development.

At the time when the chimpanzee pair were brought to the zoo, Chimpu and Champa were between 3 to 6 months old, weighing 3.5 and 4 kg each. Under the zoo's care, today they weigh between 21 and 24 kg. The need for a bigger facility to ensure their healthy growth and nurturing, has been realized through wide support, from government to private initiatives.

Central Zoo animal adoption campaign grows in momentum

The animal adoption campaign at the Central Zoo was started by NTNC last year, in response to the covid lockdowns, when the zoo had to be shut off entirely to visitors for one year. It was done to meet primarily two functions – one to ensure the funding needs of zoo animals at a time of high financial crisis, and the second being to give animal lovers and the wider public the opportunity to continue engaging directly with zoo animals.

Currently, the campaign has expanded to 89 individuals, families, and organizations who have adopted 107 individual animals. This year, many reputable personalities and corporate groups were associated with the campaign, an indication that the initiative continues to inspire public support and wildlife solidarity. Corporate groups such as Laxmi Bank, the national telecommunication service



“ With Nepal being a preferred route for illegal wildlife trade operatives, and with no dedicated animal rescue and holding center in the country yet, NTNC’s animal rescue and rehabilitation services continues to be a major national resource. This year our technicians rescued a total of 365 animals from across Nepal. Out of this total, many incidents were connected to animals rescued by authorities from wildlife traffickers and brought to the Central Zoo for holding and rehabilitation.”



provider Nepal Telecom, individuals and families of Dr. Sundar Mani Dixit, Former Chief Justice Cholendra Shumsher JBR, and philanthropists like Raji Rana were associated with the campaign this year. Over NPR 4 million in funding were pledged and raised in the process.

MoU signed with Lumbini Buddhist University

NTNC and Lumbini Buddhist University (LBU) signed a memorandum of understanding for enhancing future academic partnership and institutional collaboration. The MoU was signed between the NTNC Member Secretary Mr Sharad Chandra Adhikari and the LBU Vice-Chancellor Prof Dr Hridaya Ratna Bajracharya on April 27 2022, among senior professors and academicians. The agreement will look to focus in areas related to designing and developing future academic programs and applied

specialization capacities in the fields of wildlife sciences, biodiversity, environment and heritage conservation, and sustainable development. Presently the MoU has been signed for five years.

MoU between DNPWC, NTNC & KTK-BELT

Aimed at enhancing Nepal's biodiversity conservation and sustainable development capacities, a memorandum of understanding was signed between DNPWC, NTNC and KTK-Belt, a US-based non-profit. The MoU signed on April 02, 2022, on the sidelines of UN-organized event in Washington, D.C., will help bring additional support to NTNC's newly established Koshi Conservation Centre (NTNC-KCC) project office. Some of the priority areas will be around managing eastern Nepal's human-wildlife conflict, focusing on human-elephant conflict issues, wildlife rescue and

problem animal management, wildlife research and monitoring of KTWR's threatened fauna, grassland and wetland habitats, along with enhancing community engagement in wildlife conservation.

High-level visit to Washington

A Nepali delegation led by the Secretary of the Ministry of Forests and Environment Dr. Pem Narayan Kandel, together with the Director General of DNPWC Dr. Ram Chandra Kandel, and the Member Secretary of NTNC Mr. Sharad Chandra Adhikari, accompanied by officials from the Embassy of Nepal, met with senior officials at the U.S. Department of State in Washington, D.C. The meeting was held on March 31, 2022 to discuss

matters of mutual interest relating to Nepal's forest, wildlife conservation and climate change project initiatives. Deputy Assistant Secretary of the Department of State, Her Excellency Kelly Keiderling, and the Deputy Assistant Secretary for Environment, His Excellency John E. Thompson appreciated the Nepali side for its notable contributions in protecting nature, despite its limited resources and increased threats. Future conservation collaboration opportunities to further strengthen and expand Nepal-U.S cooperation were discussed in the process, wherein the NTNC member secretary made known about NTNC's ongoing US-supported project collaborations and priority areas, focusing on climate change adaptation and green growth investments.







SPECIES

Increasing human population, habitat loss, fragmentation due to the expanding infrastructure and development demands, poverty, poaching and illegal wildlife trade, changing climate and human-wildlife conflict are significant threats to the survival of wildlife species in Nepal. NTNC is implementing some critical interventions to save many such endangered and critically endangered species including snow leopard, musk deer, tiger, rhinoceros, elephant, pangolin, dolphin, gharials and fishing cat to ensure they share in the prosperity agenda of the country together with humans. Our core areas of interventions include, generating knowledge base on species ecology, habitat and conservation status, helping government to devise periodic species conservation action plans and strengthening capacity of frontline staff on wildlife conservation.



HUMAN-WILDLIFE CONFLICT MANAGEMENT

Addressing human-wildlife conflict (HWC) demands a comprehensive and coordinated approach. Despite significant research, piloting, and financial investment over the years, fundamental insights into the drivers of HWC and effective management measures are still lacking. This challenge is mainly due to site specific dynamic nature of HWC, influenced by a complex interplay of social, ecological, climatic, political, and economic factors. NTNC follows a multi-dimensional approach, taking into perspectives of both wildlife and humans and also considers the spatio-temporal dynamics of HWC while implementing mitigation measures.

These include putting in place strategies and actions that enable communities develop proper capacities, reduce forest dependence, make use of appropriate technologies to monitor and deter problem animals, adopt best practices and behavioral change measures, and ensure that timely relief and response is available in

the event of conflict. All these are necessary for ensuring community as well as wildlife safety, and internalizing a sense of coexistence and responsibility. Motivating communities to take sustained conservation actions and managing negative community perceptions and passions can be difficult, especially when conflict events perpetuate widespread resentment and hostility against wildlife, giving rise to retaliatory and revenge killings. In the long run, our interventions are meant to secure shared harmony of landscapes and resources, minimize human-wildlife interactions and disturbances, promote wildlife friendly behaviors and practices, and develop human-wildlife coexistence as a necessary norm.

Compensation and relief to HWC victims

- **In the Annapurna Conservation Area;** a total of 63 livestock was killed by Snow leopard (33 livestock) and Common leopard (30). Relief support of NPR. 480,600 was provided in response to 20 livestock owners. Human casualties accounted for 8 persons attacked by wildlife—Asiatic black bear (6) and Common leopard (2). NPR 447,534 was



provided as relief to the injured individuals. NPR 219,451, (50 percent by CAMCs) was provided as relief for crop damages to 95 households for about 3500 kg-equivalent of maize lost.

- **In the Manaslu CA;** relief of NPR 143,355 for 2 human injuries by Himalayan black bear, and NPR 120,000 provided for 12 livestock predated by Snow leopard.
- **In the Gaurishankar CA;** a total of NPR 1,611,509 was provided as relief for 174 livestock lost among 146 households, all due to predation by Common leopard, including relief for two human injuries by Himalayan black bear, and one household for crop damages.

Other site-specific compensation and relief support to wildlife victim families this year covered...

- Quick relief funds amounting to NPR 462,000 was provided to two buffer zone user committees of Bardia National Park – Suryapatuwa and Shivapur Ekikrit BZUC. The fund is aimed to ensure prompt payment on-the-ground for human casualties from wildlife.
- Monthly nominal stipend of NPR 1500 was provided to 33 wildlife victims (26 single women and 7 injured persons) in Bardia. The monthly stipend is being implemented since 2010 as financial relief to the families of wildlife victims.
- 75 students from IWT-affected families from in-and-around Chitwan National Park area were provided with scholarship opportunities.

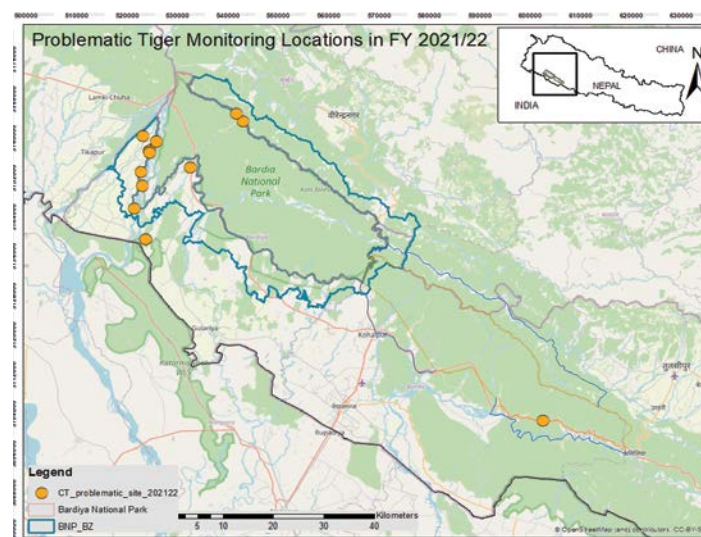
Site-specific exclusionary methods to mitigate HWC

Problem tiger monitoring

Monitoring conflict-causing tigers immediately after an incident has occurred assists park authorities in identifying problematic tigers and taking immediate action to rescue and minimize

A total of 30 families – 14 in Bardia-Banke complex, 13 in Chitwan-Parsa complex, and 3 in Koshi Tappu Wildlife Reserve area – lost their family members from wildlife attacks during this year alone. Wildlife related deaths included, 16 by tiger, 10 by elephant, 2 by rhino, and 2 by common leopard. Such families were provided with NPR 50,000 each from the central fund for HWC management, established and contributed by NTNC and other conservation partners, to ensure immediate relief to wildlife victim households for income generating activities. Additionally, the Government of Nepal also provides 1 million NPR as relief to the families who lost their members due to wildlife.

Across the NTNC-managed conservation areas in Annapurna, Manaslu and Gaurishankar, relief totaling to more than NPR 3 million was provided to 283 farmers for 249 livestock lost, 12 human injuries by wildlife, in addition to compensation for wildlife crop raiding incidents.



further casualties. Captured photographs and video from camera traps helps to assess the physical condition of the problem causing tigers, e.g., age, health, and injury. Furthermore, monitoring helps to identify whether the same individual is involved in repeated conflict cases thereby facilitating in management decision. In Bardia NP, this year camera traps were deployed in 10 locations where conflict occurred capturing

Monitoring of problem tigers and elephants near settlement areas and mobilization of wildlife rescue teams included > 30 community-led human-wildlife conflict mitigation committees formed and mobilized this year alone, with many more receiving field gear, operation and capacity support; 23 rapid response teams strengthened and mobilized; construction of 6.5 km long electric fence in Jhapa and servicing of 63 km of already installed electric fences; construction of 514 predator-proof corrals; alternative non-palatable crops expanded to more than 560 farming households; and 19 behavioral change agents reaching out to over 15,000 local people.

16 individual tigers, of which four tigers that were considered problematic were safely removed from the area.

Monitoring problematic elephants

A landscape-level elephant population assessment was completed in the previous year wherein wild elephants roaming around the Bardia National Park buffer zone were documented through photographs. This year, based on their physical identification features (tusk, ear, skin, tail, leg,

scratches, body size, and sex) initial profile of 10 problem causing elephants was created. ID features and their conflict track records are being documented for strengthening human-elephant coexistence capacities, thus creating a potential model for other elephant bearing PAs of Nepal.

Fencing and other human-wildlife conflict mitigation tools...

Different physical barriers are being adopted by the community to deter wildlife away from the settlement and agricultural fields. Some of the existing measures are electric/solar fence, concrete wall, trenches, game proof fence (and in combination with electric fence), and predator proof corrals. Among these, NTNC has been supporting to install electric fence, game proof fence, and predator proof corrals in the community to reduce HWC.

- › Electric fencing in Jhapa: Historically the forested areas of eastern Nepal, especially areas around Mechi and Jhapa, served as prime habitat and corridors for Asiatic elephants. Today these corridors are no



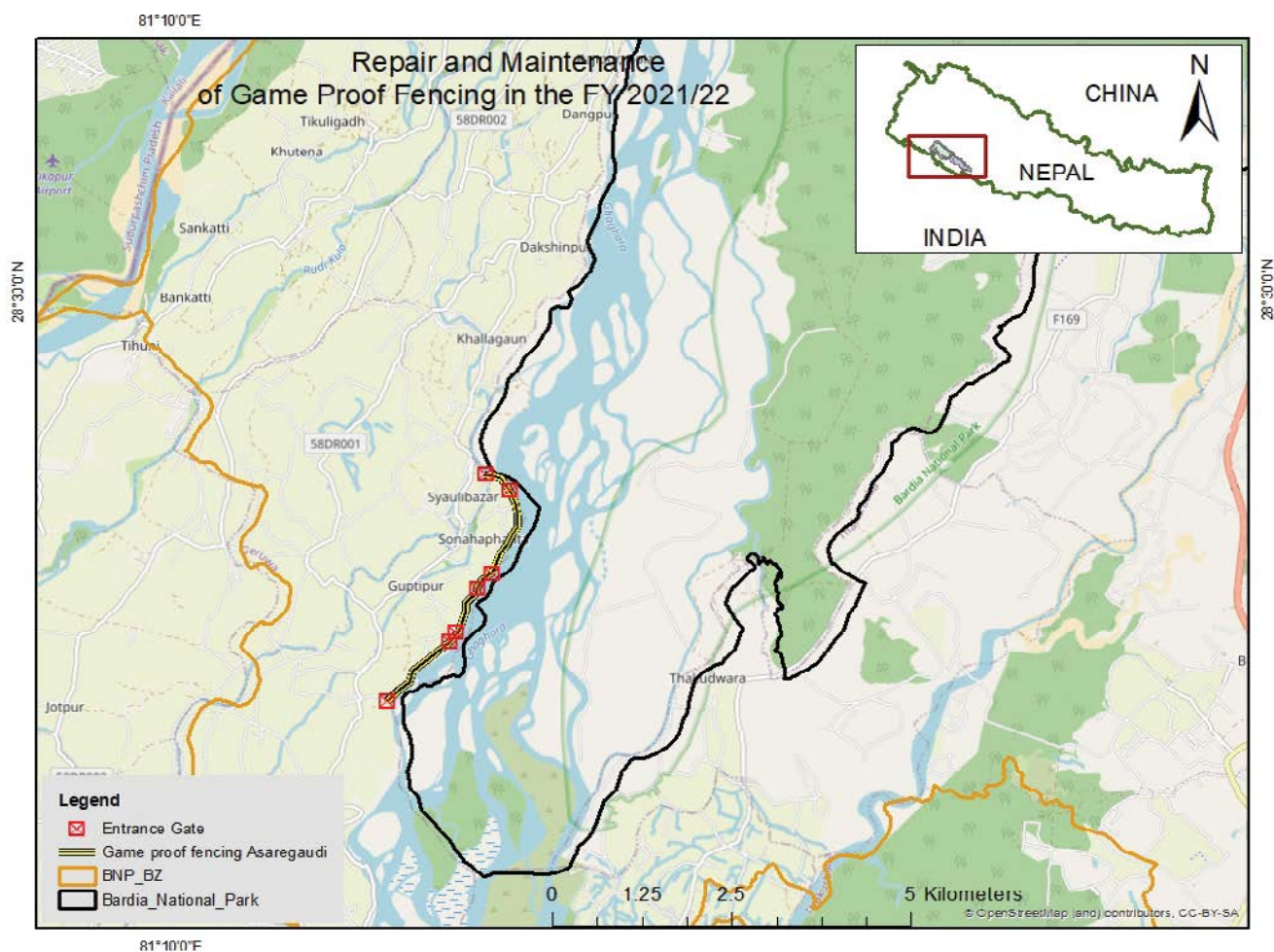


more, with large tracts of forests converted into human settlements in recent decades. However, elephants still use these traditional routes for migration which makes this region in Nepal a hotbed for human-elephant conflict. In attempts to minimize conflict exposure, NTNC continues to make meaningful interventions in eastern Nepal. This year we constructed a 6.5 km long electric fence in Bhadrapur of Jhapa around the villages. Technical repair and maintenance work of the 18 km solar fence constructed in Bahundangi area of Jhapa was also completed. Such installations are meant to divert elephant herd through forested patches, avoiding densely populated settlements and agricultural lands, thereby minimizing human-elephant confrontations.

- 35 km of electric fence are installed in the southern border of Bardia National Park to minimize human-wildlife encounters – 29.24 km in Geruwa region, 2.5 km in Khata corridor, and 3 km in Thakurdwara. This benefits some 4,000 households living along the park and forest border. In Bardia alone, approx. 75 km of electric fence is already installed. Fence maintenance and upkeep in the respective

communities, continues to be supported and capacitated by NTNC together with other partners. To keep up with the evading intelligence of elephants to bypass traditional fences, NTNC jointly with the Himalayan Tiger Foundation and Wageningen University, The Netherlands, has done a pilot to improvise the design of the electric fence in-use to make the fence more durable and effective.

- 10 km solar power fence maintenance in the far-western landscape of Shuklaphanta NP was done in Bichphanta village, which is a high human-elephant conflict prone settlement. The settlement, which lies in the southernmost part of Kanchanpur district, is connected with the Dudhwa National Park of India lying further south, and the Laljhadi biological corridor to the north, makes it a high transboundary movement zone for mega-herbivores.
- Game proof fencing: In Bardia, our study showed that more than seven tigers were dwelling in the nearby forest in the western village of the park. In the past three years, four people were killed by an individual tiger from a single village, increasing the risk of retaliatory



killings. To ensure villager safety and prevent wildlife entry into settlement areas, 10 km of game-proof fence have been constructed in the western buffer zone with the support of the park, NTNC and local governments. To strengthen fence's effectiveness, this year we constructed 10 entrance gates – 8 in Asaaregudi and 2 in Geruwa BZUCs – with more than 1200 households in Asaregaudi directly benefiting, including securing 1056 bighas of productive agricultural land.

- 514 predator-proof corrals were support for farmers living in the buffer zones of Bardia (317 corrals), Shuklaphanta (167) and Chitwan (30) national parks facing frequent losses from predators, particularly leopards and tigers. In the Tarai protected areas alone, to-date, NTNC has supported over 2,000 farmers impacted by large carnivores for constructing predator-

proof corrals. The intervention is significant and in high demand because it directly impacts marginalized households, secures livelihoods, and builds coexistence capacities.

- Agriculture-based deterrents: Alternative non-palatable crops like turmeric, ginger, lemon, and mentha, which are less desirable to wildlife and have good market value, continued to be scaled up in human-elephant conflict-prone farmlands. The program is expanded to 559 farming households from 13 BZUCs in Bardia, and has been important in mitigating risks, securing livelihoods and supplementing incomes, all while engaging HWC-affected farmers in wildlife conservation. In Shuklaphanta, 300 saplings of improved lemon varieties, along with Metha suckers, were distributed to the local communities facing high elephant conflict cases.

Behavior change campaign for building human-wildlife coexistence (HWCx)

Out of the 32 human-tiger fatalities recorded since 2019 in the Bardia-Banke complex, our findings reveal that human-tiger casualties are increasing due to limited knowledge on behavior of wildlife. In Bardia-Banke complex, this year alone there were nine deaths due to tiger attacks. Besides tigers, studies have also shown that over two-thirds of the human-elephant fatalities in Nepal occur due to negligent behaviors and ill-informed responses to wild elephants (Ram et al., 2021).

People living in the periphery of national parks rely heavily on forest resources for a living and are always vulnerable to wildlife attacks since they share the same forest landscape. To reduce future fatalities it has become increasingly important that people are aware about how to respond safely when encountered with wildlife, especially when they are inside the forest.

This year we trained and mobilized nineteen local trainers from CBAPUs in BNP buffer zone, as change agents and organized mass behavior change events in target communities to build human-tiger co-existence (HTCx). As part of the

Total coverage of the behavioral change campaign included over 15,000 local people reached through a total of 474 events. Along with the HWCx, the campaign also targeted building forest fire awareness (through 39 events covering 3144 individuals), and increasing community-based anti-poaching unit (CBAPU) activity (162 interactions covering 4066 individuals).

campaign a total of 273 events were organized, in which 8042 villagers participated. Special emphasis was put on groups living nearby the park area who frequently enter the park and forest for the collection of firewood, grass, wild vegetables, fishing, and grazing.

The campaign appears to be very effective in reaching out to vulnerable communities and is already being widely adopted by other local institutions that recognize the importance of human-wildlife coexistence. A Facebook page and group by the name of 'Behavior Change Campaign' has been set up to disseminate information about human-wildlife coexistence and awareness activities organized by the change agents. Through the messenger group, problems, progress and plans are shared and updated among the change agents and representatives of Park and NTNC.



ANIMAL RESCUE AND MANAGEMENT

365 problem wildlife were rescued across the country and either released into the nature or kept into the rescue centers based on their health condition and age. NTNC also conducted wildlife rescue and handling trainings focusing on frontline staffs working across all the tiger-bearing protected areas in the Tarai lowlands.

NTNC has dedicated wildlife rescue teams in Kathmandu, Koshi, Chitwan, Bardia and Shuklaphanta. Among wildlife rescue incidents were 10 tigers, 5 common leopards, 13 rhinoceros. With increasing habitat fragmentation and increasing wildlife populations of different species the cases of HWC are expected to increase in Nepal. This demands strategic and timely interventions to be put in place.



SPECIES MONITORING AND REINTRODUCTION

National tiger survey

Every four years a national survey is undertaken to update the status of tiger and its prey base population. The fourth national tiger survey was carried out between December 2021 and April 2022 under the leadership of the Department of National Parks and Wildlife Conservation (DNPWC) and Department of Forest and Soil Conservation (DFSC), in partnership with NTNC,

ZSL Nepal and WWF Nepal. Overall field coordination and operation of 4th Nation-wide tiger and prey survey was facilitated by NTNC. The official numbers put Nepal as the first tiger-range country to accomplish its “doubling the tiger” TX2 mission. Up from its baseline year in 2010, when it had 121 tigers, Nepal’s latest tiger population has grown almost 3X, officially numbering 355 tigers. The result which was declared by the Prime Minister of Nepal, the Rt. Hon’ble Sher Bahadur Deuba, on the occasion of the Global Tiger Day 2022, is a significant moment marking Nepal’s leadership in the global tiger recovery effort.

Nepal has five tiger bearing protected areas – Parsa, Chitwan, Banke, Bardia and Shuklaphanta National Parks – all of which are located in the Tarai Arc Landscape.

During the national tiger and prey-base survey, tiger habitat occupancy was carried out in 137 (15 km × 15 km) grid cells covering 18,928 km² of forested habitats to estimate tiger distribution across the country. Camera-trap survey was carried out in 1,843 (2 km × 2 km) grid cells encompassing an effective sampling area of 20,747 km² covering protected areas, buffer zones, corridors, and adjoining forests, to estimate tiger abundance and density. Overall effective sampling effort was 31,422 trap days. Survey of 778 line transects, with a total sampling effort of 1,438 km, provided the prey density estimates. An extensive effort of 13,065 person-days and 655 elephant-days was invested to complete the field work for the nationwide survey. Combining both sign and capture locations in camera trap, tigers were recorded in 16 districts (Rautahat, Bara, Parsa, Makwanpur, Chitwan, Nawalparasi-Bardhaghat Susta East, Nawalparasi-Bardhaghat Susta West, Dang, Banke, Salyan, Bardia, Surkhet, Kailali, Doti, Kanchanpur and Dadeldhura) of 24 districts surveyed across the country. Altogether, 692 unique tiger signs were detected, with the occupancy estimate of ~0.51 - the area occupied by tigers is 9,653 km² of the total potential habitat of 18,928 km² - across the landscape. Findings suggest opportunities for further occupancy increase through management interventions.

*Status of Tigers and Prey in Nepal 2022 report link
<https://www.ntnc.org.np/publication/status-tigers-and-prey-nepal-2022>*



Tiger population trend in Nepal					
SN	Protected Area and adjacent forests	Estimated tiger population			
		2009-10	2014	2018	2022
1	Parsa National Park	4	7	18	41
2	Chitwan National Park	91	120	93	128
3	Banke National Park	-	4	21	25
4	Bardia National Park	18	50	87	125
5	Shuklaphanta National Park	8	17	16	36
	Total	121	198	235	355

Vertical camera trap technology for monitoring prey base

A new approach of prey base study using vertically placed camera traps has been initiated in Bardia National Park. This is a novel method that is thought to yield a reliable estimate of prey base. The study is being used to determine prey density and seasonal variation in prey species distribution across the Karnali floodplain. A total of 50 automated cameras covering various habitats are being deployed. Camera traps were installed vertically on trees at a standard height of 7 meters above the ground. This is a long-term research project in which the deployed cameras are serviced and checked every month, and prey base data continues to be enhanced and better understood.



Radio-collar tiger monitoring

Linear infrastructures e.g., roads, transmission lines, and irrigation canals hinder dispersal of

wildlife between habitat patches. This can have long-term implication on the population dynamics of wildlife that have specific habitat requirement such as tigers. To study tiger-highway dynamics, a female tiger who was found frequently roaming around the highway of western Nepal was collared with satellite telemetry on March 26, 2021. Upon observation, the female tiger was seen using the highway crossing multiple times, indicating a sense of home range familiarity

with the highway. The tiger was found to have used about 21 km² area of the Karnali floodplain. Likewise, a radio-collared tiger in Parsa National Park increased its frequency of highway crossing when there was a lockdown during COVID indicating the road traffic impeding the movement of the tiger. These information are very useful to map out the key strategic wildlife crossing locations that in future can be integrated into road design to construct wildlife-friendly crossings (over-pass or underpass). Such information will also be useful to implement the Government of Nepal "Wildlife-friendly Infrastructure Construction Directives, 2022".

ID-based rhino monitoring

NTNC has been regularly conducting ID-based rhino monitoring in low density areas since last few years. Rhino monitoring is done through direct sighting from elephant back wherein individual rhinos are observed for their unique physical characteristics and are assigned with individual IDs. This year a total of 122 rhinos were monitored and ID'd – 84 rhino IDs in Chitwan NP (eastern bloc) and 38 rhinos IDs in Bardia NP. Monitoring

of such individuals involves regularly gathering information about their locations, health status, birth and death, all of which help to assess their health and reproductive performance while providing regular update about their habitat, threat levels and activity. The program has been significant in contributing to their population growth, protection from potential poachers and improved habitat initiatives.

Fishing cat research

Among the 13 wild cat species of Nepal, fishing cats are the only feline that specializes on catching and eating fish. They are a very less studied species, and like other cat species are extremely shy and nocturnal. Koshi Tappu Wildlife Reserve (KTWR) is one of the prime habitats of fishing cats. A total of five fishing cats were radio-collared and are being continuously monitored. The collars will provide important data regarding the movement of these individuals which will help to gain insight into the life of these secret animals, build and improve data and develop conservation efforts around them.



Swamp deer count

NTNC-SCP wildlife technicians actively supported the annual swamp deer count 2022 conducted by Shuklaphanta National Park. A total of 2313 individuals were recorded. ShNP is home to the largest population of swamp deer in Nepal. The population is favored due to the park having the largest grassland patch in Nepal's Tarai, along with other productive habitats such as a riverine forest. The annual monitoring of swamp deer in ShNP indicates a stable and healthy population.

Vulture survey

A vulture count program was organized covering the eastern part of ShNP on the occasion of the 13th International Vulture Awareness Day. The surveying team comprised eleven participants from ShNP, NTNC-SCP, and the Nature Guide Association (NGA). Before the survey, a vulture awareness event was organized for conservation stakeholders of ShNP. Two species of vultures, viz. 24 White-rumped vultures (*Gyps bengalensis*) and 2 Slender-billed vultures (*Gyps tenuirostris*) were sighted during the count, in addition to 53 other bird species recorded. SCP has been regularly conducting vulture surveys in ShNP and its surrounding areas. Recent surveys show a reviving population of vultures in the area.

Mid-winter water bird survey

Mid-winter water bird survey is conducted each year to monitor bird populations, which in turn serves as an indicator of the ecosystem health and functionality. The survey is conducted in collaboration with Parks, bird societies, nature guides, BZUCs and experts.

- In KTWR and adjacent wetlands, 7,664 water birds representing 59 species were recorded, from among which Ruddy Shelduck was the most abundant, numbering 1418 individuals.
- In Bardia NP and surrounding areas, 80 water bird species were recorded from three different



sites, Geruwa river system, Badaiya Tal lake, and Blackbuck Conservation Area.\

- In Shuklaphanta NP and surrounding areas, 6,478 birds were recorded belonging to 62 species.

Dolphin survey

River dolphins are a rare and less understood mammal species. Unlike their relatives, the marine dolphins, this species lives in the murky fresh waters of major rivers in Asia, including Koshi in the eastern Nepal. They feed on fresh water creatures like fish and crustaceans. However, information about their population remains short.



This fiscal year, we surveyed the Gangetic river dolphins in the Koshi River in collaboration with KTWR. Based on this survey, there are at least 17 individual dolphins in the Koshi River. No dolphins were found in the river section north of the Koshi Barrage, indicating possible obstruction for upstream dolphin movement created by the Barrage. Our survey suggests the need for a detailed study to better understand the impacts of the Koshi Barrage on dolphin movement.

Bengal Florican survey

Bengal Floricans are a critically endangered bird species that specialize in grassland habitats and are now confined in the Koshi and Mahakali floodplains. They were also present in Chitwan and Bardia national parks till few years back but have not been recorded recently. Indiscriminate burning and change in the habitat structure in the parks could be the possible causes of population decline. We conducted Bengal Florican survey in collaboration with KTWR, Koshi Bird Society, Pokhara Bird Society, Himalayan Nature, local BZUCs and Nepal Army. Survey area covered the grasslands inside the Reserve as well as areas in Sunsari, Saptari and Udayapur districts. At least 21 individual Bengal Floricans were recorded during the survey.

Additionally, we also formed Bengal Florican Conservation Sub-committees in Haripur,

Bairawa, Barmajiya, Prakashpur and Tapeshwori community forest user groups. The committees were capacitated with necessary trainings and equipment required for Bengal Florican monitoring, which was later accompanied by mass community awareness raising activities.

Gharial reintroduction in Koshi river

Gharials are among the most critically endangered wildlife species in Nepal. In an attempt to re-establish the species back in Koshi River and to create a pocket population for genetic diversity of the species, DNPWC translocated 20 individuals (17 female and 3 male) from the Gharial Breeding Center at Kasara to the Koshi River on the International Wetland Day 2022. Only adult individuals of breeding size were translocated. NTNC partially supported in the translocation, release and post-release monitoring of the gharials.

Wildlife Crime Control

Given its poor socioeconomic standing, and its location between two major world economies, Nepal continues to be a hotspot for wildlife criminal networks, often known as a favored transit point for illegal wildlife trade. The country is home to rare and endangered species that is perpetuated covertly by the high global demand for wildlife parts. This can create big pushbacks for our conservation efforts on the ground. However, despite existing threats, the country continues to make important recoveries for its endangered wildlife species, like tigers and rhinos. The progress speaks much about the country's wildlife crime control and anti-poaching capacities, where stakeholder from all sides, from government to local communities to donors, security personnel to women and youths, have led the way forward, demonstrating globally that effective conservation can be realized through strong leadership and collective efforts, even with limited resources.



Forest Patrolling in NTNC-managed Conservation Areas

> 35 long range forest patrolling events were carried out this year in NTNC managed conservation areas, 25 by ACAP, 6 by MCAP and 4 by GCAP; about 200 animal traps and snares were removed in the process, 6 dead bodies of wildlife were recovered; in total 19 legal cases were handled, of which major illegal activities were related to public land encroachment, illegal collection and transportation of NTFPs, forest fire, excavation and transportation of riverbed materials, and illegal tree logging.

Community Based Anti-Poaching Unit

Community-based anti-poaching units (CBAPU) are formally organized volunteer networks of local youths actively engaged in conservation around the PAs. They have a day to day responsibility in ensuring the proper management and protection of wildlife, especially in community forests around national parks, and their role in wildlife crime control through various anti-poaching activities, including regular patrols, surveillance and information sharing, are especially noteworthy. CBAPUs also provide vital support in other

In the Bardia-Banke complex, 28 CBAPUs, comprising over 3600 local youths in collaboration with Park and buffer zone committees, NTNC, and security forces, have earned widespread reputation for their active volunteering and effectiveness in wildlife conservation, park and community forest patrolling and monitoring, human-wildlife conflict response, animal rescue support, and conservation campaigning and collaboration, among other functions.

conservation activities such as human-wildlife conflict management, information coordination, and raising awareness in communities. This year:

In the northern belt of Chitwan, we successfully rejuvenated the CBAPUs through our IWT and KNCF funded projects focusing on strengthening CBAPUs and forest guards with trainings, field gears and patrolling support. In the process:

- 94 joint patrolling exercises by CBAPUs/ forest guards from six CFUGs in CNP were mobilized for regular patrols in their respective community forests – Ajingarey CF, Kalika CF, Amritdharapani CF, Baghdevi CF, Khagendramalli CF and Lother CF. A total of 32 members regularly patrolled their respective forest areas for illegal activity,





The Khata corridor is a high wildlife activity transboundary zone in Nepal that connects prime tiger habitat between the southern jungles of Nepal and the forests of northern India. The corridor has 9 adult breeding tigers, 3 of which live exclusively in the corridor, 4 of which share the habitat of the corridor, buffer zone, and park core area, and 2 male tigers who share the habitat of the corridor and buffer zone only. Likewise, an elephant herd of approximately 45 individuals and 5 rhinos are frequently spotted in the corridor forest. This makes the settlements along the corridor particularly prone to wildlife conflict and crime. In the PAPU working area there have been no poaching records of tiger, elephant, and rhino, while the movement of tigers have remarkably increased in the corridor forest.

while also building conservation actions in their communities, including providing valuable support during various wildlife monitoring, surveys and rescue operations.

- Together with CBAPU members of four community forests—Kankali, Ajingarey, Amritdharapani and Kalika CFs—we installed camera traps for enabling local wildlife monitoring. With our frequent trainings on building anti-poaching capacities, these communities now have members who are capable in the day to day conservation activities that affect them, actively taking part in wildlife monitoring and rescue operations, while directly helping to minimize man-tiger encounters.
- 91 members from 15 community groups were trained for a total of nine days on wildlife monitoring and safety measures, identification techniques and behaviors, wildlife rescue and human wildlife conflict management roles,

including knowledge about conservation-related rules and regulations. Participants were also refreshed and familiarized with basic monitoring tools like GPS, trail cameras, datasheet, etc.

- To ensure patrolling groups receive the right kind of support in terms of safety equipment, we supported the trained CBAPUs with necessary field gears, torch light, jacket, boots and backpacks, this while attempting to make their datasets more scientific with supply of technologies like GPS device, digital cameras and trail cameras. The participants were also provided with a wildlife monitoring datasheet for scientific documentation.
- CBAPU mobilization in Bardia included a total of 3366 active youths from 131 units representing 19 CBAPU subcommittees of Bardia NP, and more than 300 youths of nine CBAPU sub-committees of Banke NP. This year, 79 CBAPU units of 9 sub-committees

in Bardia were reformed; support for logistic and ground equipment for carrying out anti-poaching operations were made; in total 162 meetings were organized by CBAPUs where 4066 persons took part; two review reflection meetings were organized with representatives from all the 19 CBAPU sub-committees of Bardia for sharing experience-based documents and future plans and actions; 11 local-level meetings involving 376 local youths and community members were organized in conflict-prone sites.

- 256 participatory anti-poaching unit (PAPU) youths from three villages are being mobilized through the support from The Fund for The Tiger to conduct regular anti-poaching operation in the buffer zone of Bardia National Park and Khata corridor. The PAPU program has been organized since 2009, focusing on controlling illegal poaching of wildlife by involving village youths in anti-poaching together with frontline staff of the park and security forces. This year the PAPU team organized two interaction programs in the Dalla area where BNP, NTNC, Nepal Army, local government authorities, traditional village leaders, BZUC presidents, and the chairperson from Khata Community Forest discussed issues and challenges faced in anti-poaching operations and human-wildlife coexistence strategies among CBAPU members from Dalla, Pathharbhoji, and Kailashi units were discussed.

In Shuklaphanta, more than 200 youths from CBAPU networks were mobilized throughout the year in regular patrolling and capacity building activities, this being in addition to support for community engagements.

- CBAPU interaction workshops were organized with CBAPU networks, BZUCs, ShNP, Nepal Army, and NTNC, to discuss contemporary conservation challenges and inputs. Technical sessions on various aspects of wildlife conservation such as wildlife diversity and

distribution, potential problem causing animals and safety techniques, wildlife tracking methods, among others, were delivered by NTNC-SCP staff at the workshops.

- Wildlife technicians of NTNC-SCP and senior nature guides of ShNP led exposure visits to the core area of the national park for 34 CBAPU members, so as to enable participants with direct field knowledge on wildlife habitats, species richness, and tourism attractions of ShNP.

Wildlife crime-focused trainings focusing on park and security frontline staff

Trainings focusing on building frontline capacities to counter wildlife crime and poaching-related threats were organized targeting Bardia, Banke and Shuklaphanta National Parks and security persons, along with associated divisional forest offices. They included targeted sessions for improved understanding of wildlife crime situation, knowledge of key species under threat, crime hotspots for poaching and trade, key mechanisms to deal with wildlife crime, identification procedures of major animal species in illegal trade, wildlife law and legal procedures, and practical session on crime scene procedures and investigation techniques, all of which are critical to ensure swift checks and responses to wildlife crime situations as they unfold on the ground.

- Law enforcement trainings to combat illegal wildlife crime was organized at NTNC, Bardia for 19 park and division forest officials from Bardia, Banke, Shuklaphanta national parks and Surkhet. Following this, similar trainings were organized by the divisional forest offices of Surkhet, Bardia, and Banke for frontline staff directly dealing with illegal wildlife cases on the ground.
- Two trainings on wildlife crime control for 50 frontline staff from enforcement agencies in Shuklaphanta National Park (ShNP)



were organized covering participants from ShNP, Rudradhoj Battalion, Nepal police, Armed-police force, Divisional Forest Office-Kanchanpur, and District Postal Office-Kanchanpur.

- 23 refresher trainings on patrolling and information gathering was completed for 547 frontline park staff and Nepal Army battalions engaged in park security of ShNP.
- Eight wildlife Crime Control Bureau (WCCB) meetings were supported this year— six in Bardia, Banke, and Surkhet, and two in Kanchanpur districts—bringing together related park wardens and DFOs to discuss status on anti-poaching operations, wildlife crime cases, and law enforcement capacities. We also took part in the formation of a new WCCB in Dadeldhura this year.
- Two review meetings engaging 25 officials from ShNP, NTNC, and Rudradhoj battalion of the Nepal army were organized to share information on effectiveness of cameras deployed and response mechanism adopted in ShNP and buffer zone areas. Discussion included key illegal activities recorded by surveillance cameras targeting poachers and steps for improved interventions. A basic database for regular patrolling designed by NTNC was handed over to the park authority

CONSERVATION BREEDING OF CRITICALLY ENDANGERED SPECIES

The Vulture Conservation and Breeding Center

(VCBC) was established in Chitwan National Park, Kasara, in 2008, to ensure the long term survival of the critically endangered White-rumped vulture (*Gyps bengalensis*) by the Government of Nepal, with support from various conservation partners – NTNC, ZSL, BCN and RSPB. The VCBC has been under the management of NTNC-BCC since its establishment which has two full time keepers and one veterinary doctor. A total 49 captive White-rumped vultures have been released in five different years to enable their successful breeding in the wild, contributing positively to their population increase. This fiscal year, 20 vultures were shifted to the Vulture Soft Release Aviary in Pithauli, Kawasoti, among which 10 were released into the wild and another 10 will be released next year. After shifting the remaining vultures to the release site next year, the VCBC is anticipated to be closed, with the facility prepared to be used for other purposes.

The Elephant Breeding Center

(EBC) at Khorsor is a crucial resource in the conservation efforts of Chitwan National Park (CNP). The captive elephants at the center are used mainly for patrolling, wildlife monitoring, rescue, treatment, and research activities in the difficult to access and dense jungles of the Tarai lowlands. EBC was established in 1986, wherein elephants born at the center are trained after the age of 3-4 years, looked after and mobilized as per the need of the government.

The center remains open to the public providing opportunities for observing their social behaviors and interactions. Due to abundance of breeding females, the center is also a prime attraction for wild bull elephants. This makes it much popular among elephant enthusiast and visitors. Tourism following strict visitor protocols helps generate revenue for sustaining the facility. NTNC-BCC supports CNP in revenue collection and mobilization. The center received 88,256 visitors this year.

Gharial Breeding Center

Gharial (*Gavialis gangeticus*) is a critically endangered fresh water crocodile with less than 600 adults remaining in the wild. Almost at the brink of extinction in Nepal's river, to revive their population in the wild, the Government of Nepal along with other conservation partners established the Gharial Breeding Center (GBC) in 1978 at Kasara, Chitwan National Park. GBC collects gharial eggs laid at the river banks and allows them to hatch in captivity. After the eggs are hatched, the hatchlings are raised for about five years following which they are released back in the rivers annually. The center also serves as a popular attraction for tourists with 43,947 visitors at the center this year. NTNC-BCC has been supporting CNP to collect revenue and mobilize it for the betterment of the center.

Management of reintroduced blackbuck

Once among the most abundant wild ungulates in the Indian sub-continent, the blackbuck (*Antelope cervicapra*), also known as *Krishnasar* in Nepal, is now confined within a few isolated habitats of India and Nepal. It is nationally endangered species in Nepal. The blackbuck reintroduction program, was initiated in 2012, wherein between 2012 and 2015, a total of 42 blackbuck were translocated to Hirapurphanta of ShNP. Since then NTNC through its Shuklaphanta Conservation Program is extending technical and financial support to manage the reintroduced blackbuck population. The population of blackbuck has currently reached 202 individuals (adult M: 51, sub-adult M: 16, adult F: 73, sub-adult F: 14, fawn: 48)

WILDLIFE HEALTH

Elephant health camps were taken out this year focusing on providing health care for captive elephants across the country, from Koshi in the east to Shuklaphanta in the west. In total 177 captive elephants were treated. The health camp also helps to ensure elephant health care and

welfare is practiced. This is the second elephant health camp organized with the support from "Elephant Healthcare and Welfare Emergency Lifeline Fund", a collaborative approach of Elephant Care International, Work for Wildlife and Golden Triangle Asian Elephant Support Foundation.

Veterinary services included tuberculosis testing, treatment for injured elephants, Herpes virus diagnosis and treatment, among others. Physical examination, deworming, foot care, minor I&D and treatment of elephants, supplements and antiseptics administration were common activities at the camp. Blood samples were collected from each elephant for pathological investigation in the lab. Serum sample was banked for the future activities like biochemistry, serology for tuberculosis.

Wildlife hospital services

Formally opened since December 2020, the wildlife hospital, operated by NTNC in Sauraha, Chitwan, is meant to support the increasing risk of wildlife disease outbreaks. Mindful of these sensitivities, NTNC works together with the government for developing wildlife health and disease treatment capacities and surveillance of wildlife diseases across the country.

Some of the large species treated at the hospital this year included, 26 individuals belonging to nine species, including, 9 tigers, 2 rhinos, and 1 elephant. We also conducted postmortem examination on 37 dead rhinos in and around CNP, wherein tissue and blood samples from the dead animals were collected and safely stored at our lab. Currently we are working in collaboration with the Columbus Zoo and Cornell University from the US and the Agricultural and Forestry University in Nepal for further examination of the samples to determine the causes of unnatural death among wild rhinos in CNP.

Similarly, NTNC has a wildlife hospital in the Central Zoo at Kathmandu. Over 180 rescued wildlife and over 1100 animals housed at the zoo were provided health services throughout the year.





PROTECTED AREA & ECOSYSTEMS

NTNC, since its early years, has been involved in the establishment and effective management of protected areas in Nepal. NTNC is the only institution in the country mandated by the Government of Nepal (GoN) to manage three protected areas, namely: Annapurna, Manaslu and Gaurishankar Conservation Areas which make up 33% of the total protected area coverage of the country. NTNC works by closely collaborating with the government and other conservation stakeholders across all the PAs in Tarai where NTNC helps build conservation capacities through wildlife research and monitoring, habitat management, human-wildlife coexistence, problem animal management, combatting wildlife crime, community mobilization and capacity development.

NTNC, as a change agent in the PA management, has introduced and successfully implemented community-based conservation and landscape level biodiversity conservation models. Our initiatives ensure that local communities have the required capacity to take lead in the sustainable management of PAs in the long run, where they are both the primary decision makers and beneficiaries of conservation.

STRENGTHEN LOCAL INSTITUTIONS AND COMMUNITY-BASED ORGANIZATIONS

Conservation goals can be achieved only when local communities and institutions are effectively engaged in conservation initiatives. Nepal adopted community-based conservation in the mid-1980s, starting with the Annapurna Conservation Area. As a proven means to enhancing community participation in PA management, NTNC helps establish and strengthen community-based institutions – Conservation Area Management Committees (CAMC), Buffer Zone User Committees (BZUC) and their sub-committees. Through close consultation and engagement, NTNC helps build a constructive relationship between PAs and local communities. Such institutional arrangements that prioritize community ownership and responsibility

have been vital in reducing cases related to poaching, forest encroachment, illegal grazing, managing natural resources, thus helping to secure overall biodiversity.

- Community office operation and strengthening support was provided to 85 Conservation Areas Management Committees (CAMCs) of NTNC managed conservation areas.
- Institutional strengthening – technical and logistic – support was provided to 24 buffer zone user committees (BZUCs) and 53 buffer zone community forest user groups (BZCFUGs).
- To strengthen the governance of community-based institutions, support was provided to conduct audit and public hearing of 115 committees (85 CAMCs, and another 30 sub-committees).





- Surveys and consultations were completed at the field level to prepare operation plan for 17 CAMCs of NTNC managed conservation areas.
- Five day care centres were supported for operation in ACAP region – 3 in Sikles, 1 each in Ghandruk and Bhujung. In total 73 infants (36 boys and 37 girls) from different communities were cared for to help reduce workload of local women.

HABITAT MANAGEMENT AND RESTORATION

Habitat management and restoration is a fundamental strategy in our conservation approach, necessary to protect and enrich the biodiversity of the region. We combine both modern science and traditional habitat management practices, prioritizing ecosystems functionality with community benefits. NTNC's intervention includes conserving endangered wildlife and their habitats, promoting habitat connectivity, restoring degraded ecosystems, reforestation, wetland restoration, invasive

species management, building capacity of local community, improved ecosystem functioning and increase resilience to environmental stressors such as climate change.

- Applied grassland management interventions were done to create 300 ha of healthy and invasive-free grazing lawns for rhinos, *Amas*, and other herbivores in 23 locations of Chitwan National Park and Koshi Tappu Wildlife Reserve.
- Grassland and habitat management focused trainings were organized for 33 participants from all the Tarai protected areas (Koshi Tappu, Parsa, Chitwan, Banke, Bardia, Krishnasar CA, and Shuklaphanta), Division Forest Office Kanchanpur, and frontline staff of NTNC, ZSL, and Himalayan Nature.
- NTNC also assisted in conducting a detailed assessment of key wildlife habitats (grasslands and wetlands) of Shuklaphanta NP, whose findings will help guide habitat management effectiveness and future initiatives.

NEW DEDICATED OFFICE “KOSHI CONSERVATION CENTRE” ESTABLISHED AT KOSHI

Koshi Conservation Centre, or NTNC-KCC, has officially been established as NTNC's newest project office in eastern Nepal at Koshi Tappu Wildlife Reserve. The new centre was formally inaugurated on September 17, 2021 by the Then Hon'ble Minister for Law Justice and Parliamentary Affairs Mr. Gyanendra Bahadur Karki among some 300 attendees, including senior government officials, local government representatives, community members, Nepal Army personnel, conservation stakeholders, and the media. The event was chaired by NTNC Chairperson Dr Krishna Prasad Oli.

Some of the target areas that NTNC-KCC will be prioritizing include, support in reducing eastern Nepal's human-wildlife conflict, especially focusing on human-elephant conflict issues; wildlife rescue and problem animal management, where going forward a dedicated wildlife rescue team will be set up; wildlife research and monitoring of the reserve's "threatened" fauna

like the Bengal florican, Gangetic dolphin, Fishing cat, along with other winter water birds and aquatic fauna; grassland management initiatives focusing on Bengal florican and *Arna* conservation; along with building community-led conservation initiatives. For initiating these targets, NTNC has already been entered into an agreement with KTK-BELT (Koshi Tappu Kanchenjunga Biodiversity Education and Livelihood Terra-Studio).

SUSTAINABLE FOREST MANAGEMENT

NTNC's work in promoting the sustainable management of natural resources, in partnership with local communities, ensures the long-term health and vitality of the country's forests and ecosystems services. Our afforestation and reforestation initiatives over the years, coupled with sound community-based user practices, have resulted in increased and improved forest cover across our working areas. Together with this, we work closely with local communities to enhance human benefits from the sustainable use of natural resources, through the promotion of sustainable harvesting practices, development of





community-based resource management plans, establishment of forest and NTFP nurseries, forest fire management, and through knowledge and capacity building initiatives.

- 10 nurseries being managed and supported by NTNC's project offices produced > 50,000 and distributed 42,257 seedlings of 45 plant species for private and community plantation, covering an area of around 26.40 ha.
- 260 fire fighting-related equipment and tools were provided in four fire-prone areas of ACA to enable local communities respond to managing wildfire risks better in the future. In Bardia, 39 buffer zone community forest user groups (BZCFUGs) involving 3144 users were facilitated with coordination support to take early action for forest fire control.
- Meetings related to management of *Yarsagumba* (high value NTFP) were organized in NTNC managed conservation areas before

the start of yarsagumba collection. Such meetings help to ensure proper preparation and coordination for the collection of the high demand NTFP.

- Altogether NPR 16.83 million revenue was generated through sustainable harvesting and issuing of release paper for forest products including 19 varieties of NTFPs in NTNC managed conservation areas.
- Support for the establishment of six new forest-based cottage industries, aimed at promoting indigenous and Dalit entrepreneurship was made.
- Manaslu Conservation Area's NTFP Harvesting Plan was prepared and approved for sustainable use and conservation of NTFPs in the region.





CONSERVATION ECONOMY

Linkages between natural resource conservation, poverty reduction and green economic development in Nepal is big. The state of Nepal's protected areas, made up of national parks, conservation areas, and wildlife and hunting reserves, not only have far reaching environmental and ecological implications, but also create remarkable socio-economic value for its inhabitants. Majority of tourists coming to Nepal visit its protected areas (PAs), making it an important source of income for PA-communities, while contributing significantly to the country's foreign currency reserves. To synergize economic opportunities in protected areas NTNC focuses on developing nature-based tourism potential of PAs and building sustainable value chain linkages around tourism in a way that builds diversity, innovation and shared growth.

Along with tourism, we support local communities to enhance livelihood and income generation skills. Our livelihood support programs focus on agriculture and livestock farming improvements, providing farming support for seeds and related technical capacities, promoting improved animal rearing practices, building cash crop farming capacities in cardamom, tea, coffee, vegetable and fruit farming, and promoting local entrepreneurship and green-based skills, along with improved community access to finance.

NATURE-BASED TOURISM

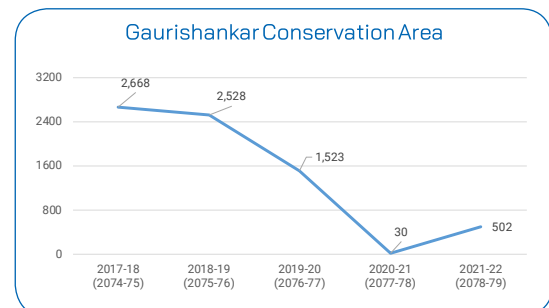
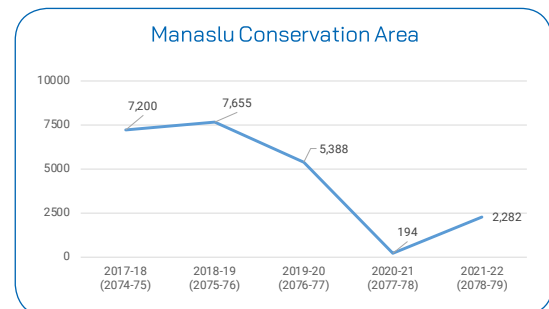
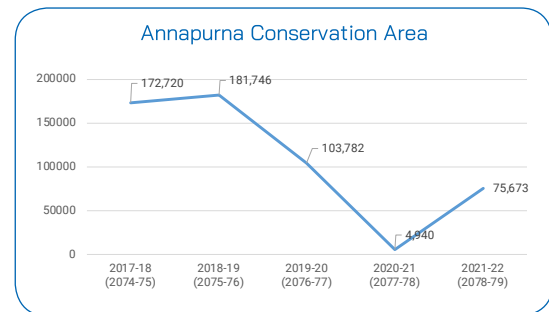
Home to incredible natural and cultural diversity, protected areas in Nepal are also hotspots for tourism activity. They occupy 23.39 percent of Nepal's total area and have a major share of foreign tourists visiting Nepal. Tourism is key to Nepal's national economy contributing significantly to its GDP, employment rate and foreign earnings. Famed globally for mountaineering and trekking, wildlife and adventure tourism, spirituality and pilgrimage, the outdoors in Nepal offer remarkable variety and uniqueness. NTNC's role in promoting biodiversity conservation and protected area development continues to be a major determinant in scaling the quality of touristic experiences and the capacity of host communities alike. Throughout we follow a nature-based approach to tourism, valuing authenticity, culture, and hospitality, along with supporting tourist information, experience and safety. Some of the initiatives made this year covered:



Offering a range of activities to do from trekking and mountaineering in the high mountains, wildlife and adventure tourism in the Tarai, to spiritual and adventure tourism, the variety and value for tourists visiting Nepal is special. With easing of covid restrictions globally, this year tourist activity in protected areas saw a major push with a total 78,457 foreign tourists visiting NTNC-managed conservation areas – ACA 75,673, MCA 2282, GCA 502.

- **16 tourist information centers** were in operation across NTNC-managed conservation areas, in ACAP (9 centers), MCAP (2), GCAP (3), along with three tourist counters in Kathmandu, Pokhara and Besisahar. These facilities process visitor transit in and out of conservation areas, along with furnishing tourists with information and supporting their other needs.
- **For improving trail navigation and tourist information access, trail safety and connectivity**, > 100 signposts, including trail markings and signages, information boards and location boards, were installed along various trail routes and destinations in the Annapurna, Manaslu and Gaurishankar conservation areas.

Five-year tourism trend in NTNC-managed CAs



From the very start, women have been frontrunners in institutionalizing homestays in their respective communities. Their leadership and cumulative success in powering nature-based economies in protected areas can often be overlooked. Today there are some 500 homestays in operation across NTNC-managed conservation areas, in the mountains, with a bed capacity of over 2200, in which women maintain leading roles. In the lowlands, NTNC's support to park-buffer zone communities in establishing and institutionalizing homestays, like Kumroj, are serving as models for other potential communities. While the potential for upscaling business and professional competencies of homestays are many, their role as primary stakeholders in advancing nature-based tourism services remain invaluable.

Community homestays are examples of how local communities are able to have a big role in promoting sustainable tourism and improved economic activity. Each community homestay is meant to be a unique reflection of the remarkable cultural diversity and their harmonious coexistence with nature ingrained in traditional values. Focusing on this capital, and keeping in mind the growing value of delivering ethical, authentic and unique experiences for visitors, NTNC's support to homestays focus on enhancing already existing households with improved hospitality capacity and professional skills. By unlocking the potential for monetizing traditional values and ways of life, our aim is to develop protected area communities into future innovators in nature-based tourism. In this year:

➤ **Eco-trail destination development in Chure**

In the northern buffer zone along the Bardia and Banke national parks, a field team from BNP and BaNP, rural municipalities, and BZUCs carried out a survey to identify favorable trekker locations and points of interest. The team estimated that the entire 100 km-long trekking route could be completed in seven days. Following our findings, this year we initiated a project for setting up homestays in collaboration with rural municipalities. 19 households in five districts, Bardia, Banke, Surkhet, Salyan and Dang, were selected to upgrade as homestays, actively managed by women. In the process materials worth NPR 100,000 were provided to each homestay



Ecotourism outreach and promotion workshops aimed at building private sector engagement, sensitizing collaboration and investment opportunities, and developing ownership on the role of varying stakeholders, from government, community and industry leaders, park authorities and conservation partners, including the role of the media, continued to be prioritized this year.

to kick-start operations. Support was also provided for making necessary logistical arrangements, renovating bathroom and plumbing. Prior to their operation residential-level hospitality management and skills-focused trainings were conducted at Bardia's Dalla Homestay, a successfully managed community homestay, which was initiated through the support of NTNC. Each new homestay will be registered in their respective rural municipality and will operate under the local government homestay operation guidelines set up for this purpose. At present about 120 houses are affiliated with homestay tourism in the buffer zone of Bardia and Banke national parks, with growing prospects each year.

- **Exposure tours were organized for 21 homestay owners** of Gavar Valley homestay of Banke and Satkhaluwa Tal homestay of Bardia this year. Here participants got to observe and experience various community-level initiatives, from hospitality service to human-wildlife conflict management, being taken in prominent tourist and wildlife-rich sites like Dalla homestay, Ghodaghodi Lake, including experiencing the core areas of Bardia and Shuklaphanta national parks.
- **Cooking trainings were organized for 27 homestay owners** of BNP buffer zone area with focus on preparing and adapting local dishes for specific meals, dish presentation, serving and focusing on enhancing visitor eating experience.

- **Homestay operators in GCAP region** availed material and tourism capacity development support aimed at improved services, with targeted education and knowledge campaigns being carried out for homestay operators in Shivalaya of Ramechhap district. At present there are 82 homestay operators in GCAP region.

- **Focusing on the potential of Banke NP** we organized ecotourism promotion workshop among 100 participants from more than 30 stakeholder institutions covering all local municipality/rural municipality/sub-metropolitan city chief of Banke, CDO Banke, CEO Nepal Tourism Board, NATA President, chief of Raptisonari, forest officials, tourism entrepreneurs, community leaders, conservation partners, chiefs and representatives of all government offices of Banke, and local journalists.

- **In Shuklaphanta NP** > 50 tourism stakeholders from park and buffer zone, local government agencies, tourism and hospitality entrepreneurs, nature guides, and media persons engaged focusing on linking tourism funding opportunities, product development and promotion, destination development, infrastructure, and tourist value and experience.

Tourism trainings and youth capacity building

NTNC continues to focus on building youth capacities and professional skills in tourism with the dual purpose of developing them as future guardians of nature as well as ensuring that the benefits of conservation directly touch local communities. Our nature-guide training courses targeting youths already working or aspiring to become guides is a notable example of this. Over the years we have already trained more than 1600 youths to become nature guides. Comprising



a mix of field, classroom and evaluation sessions, participants get to learn about diverse aspects related to ecosystem and landscape functionality, flora and fauna conservation, wildlife identification, animal behavior, jungle safety and survival techniques, including professional ethics, communication techniques, and protected area rules and regulations. Such trainings are part of our initiative to fulfill the demand for developing competent nature guides in protected areas and associated landscapes and creating green job skills for the future. This year,

- Nature guide training was organized for 79 working nature guides and youths of ShNP, CNP and KTWR, over a period of 26 days in collaboration with Park and partners.
- Professional cooking training for 22 youths working in local hotels around Bardia NP over a period of eight days. Trainees are currently receiving on the job training where after they will be evaluated and given professional certificates.



Livelihood generation for illegal wildlife trade-affected communities

In an effort to address the intergenerational effects of illegal wildlife trade (IWT) on indigenous forest communities we launched various livelihood support programs this year targeting families whose members are serving, or have previously served, long prison sentences for wildlife-related crimes. The program's focus was kept on IWT-affected communities living in the northern belt of Chitwan NP, mainly on the Chepang and Tamang ethnic groups of the area, who are often lured by wildlife crime syndicates, due to their poverty and traditional forest knowledge. Majority of

Economic empowering for IWT-affected communities like the Chepang, who are traditional hunting communities, and who are extremely vulnerable to wildlife crime networks due to their poor socio-economic standing, is key for combating poaching-related threats in the long run. Many Chepang community members already have, and continue to face, long-term sentences for wildlife-related offences, severely affecting their families' future. Recognizing their vulnerability, NTNC has been taking steps to uplift and provide enabling conditions to motivate such communities toward transforming their traditional forest knowledge for benefitting conservation.

the activities were conducted with the financial support of the Illegal Wildlife Trade (IWT) Challenge Fund, UK, and from Keidanren Nature Conservation Fund (KNCF), Japan. The anticipation is that by creating alternative livelihoods opportunities, and through education and awareness, such vulnerable groups will be able to

break out of their IWT-inclined compulsions.

- **Vegetable farming support** was provided to 61 IWT-affected households of two CFUGs in Chitwan. Together with seedling and material support, off-season vegetable farming trainings were conducted, focusing on cultivation techniques, greenhouse provisions, disease identification and treatment, controlling pest infestations, and market opportunities.
- **Goat farming support** included a total of 95 improved breed goats for 50 households, along with construction of predator-proof corral and medicines for common diseases and necessary minerals for nutrition for each of the households. Prior to the support, we conducted three trainings on livestock farming and management for 70 farmers focusing on livestock nutrition, shed management, hygiene and sanitation, general health monitoring, identification of common diseases like foot and mouth disease, rabies and milk fever, and steps for prevention and/or treatment.



- **Cow farming support** was provided to 28 households of two CFUGs in Rapti Municipality. Together with improved cow breeds, support was provided for medicines, minerals, veterinarian services and trainings on livestock management. After two months we conducted a livestock health camp focusing on general health assessment, deworming, and nutritional treatment, addressing reproductive issues for more than 2700 livestock and poultry covering 158 households.

- **Bee-keeping support** and training was conducted for 15 persons in collaboration with Kalika CFUG. Participants also received bee frames, base beehives, harvesting tools and safety gears, honey extracting machines and smokers. The skills-based support aimed at uplifting the socio-economic status of the Chepang community has already led to the establishment a collective bee farm by the trainees.

- **Skilled-based training** programs, like electrician and house wiring training, plumbing training and driver training, aimed at developing vocational capacities for income-generation, while reducing dependency on forest resources, were organized for 55 youths from four CFUGs. Each training was for 1-3 months duration, where upon completion, trainees were provided with professional certification from the Council for Technical Education and Vocational Training (CTEVT) to increase their employability. In the coming fiscal year a survey will be conducted to analyze the program's effectiveness.

- **Six-month long sewing and tailoring trainings** were organized for 40 women of BNP and BaNP buffer zones. A new community tailoring center was established in Dalla where two sewing machines were supplied and four female CABPU members employed.

Diversifying opportunities for farmers by introducing healthy breeds of livestock and developing local capacities in order to systemize and build occupation-based knowledge, skills and market competencies can go a long way. For rural communities to transition into higher income levels, and reduce routine dependency on forest resources, targeted interventions can bring lasting changes.



- **Carpet weaving training** was provided to 20 women in coordination with Kalika Community Forest and B.M. Handicraft, which itself is an enterprise established with NTNC's support and is now a self-sustaining initiative supporting other local women. Training participants are already generating decent incomes from their new vocation.

- **75 children of IWT affected families** received scholarship support in an effort to promote children education opportunities and enhance awareness and action in their respective communities. In addition multiple education and outreach campaigns were taken out targeting community members, youth groups and students.

In Banke and Bardia alone, a total of NPR 4,574,000 seed money was supported and mobilized among 31 groups of 13 BZUCs this year, with 1038 members having access to funds dedicated to enhancing livelihood-based support.

Income generation targeting human-wildlife conflict-affected communities, with emphasis on women and youths

- **14 alternative livelihood cooperatives were formed this year** – 8 in BNP, 4 in BaNP and 2 in ShNP buffer zones, consisting of more than 500 members. Seed money of NPR 4.5 million was supported in the process, livelihood plans and revolving fund mobilization guidelines prepared, together with human-wildlife conflict management plans, and trainings were organized. Through this mechanism identified target group members can avail soft loans at nominal interest rates to initiate alternative livelihood activities. The mechanism will incentivize monthly savings by group members, which will be deposited in the cooperatives and mobilized for income generation activities like goat keeping, pig

farming, vegetable farming, among other skill development opportunities.

- **Five commercial vegetable farming groups** comprising of mostly women in ShNP, formed through the support of NTNC and ZSL, were supplied with seeds and tools. Trainings were provided to 54 vegetable farmers, along with one mini tiller supplied to each group, and support provided for mobilization. Average family incomes among each group member this year was above NPR 50,000, which is a significant contribution for HWC-affected households.
- **Livestock management trainings**, focusing on goat and pig farming business, were organized for 17 women group members of BNP. Participants were also taken to a private-run modern pig and goat farm for exposure to learn about fodder management, shed house management, and medication practices.
- **Handicraft training**, focusing on making *Dhakiya*, traditional grass-woven baskets, were organized for 45 women in BNP.



- **Diversifying economic opportunities for CBAPUs** of Bardia and Shuklaphanta, 26 youths from conflict-prone sites and corridor areas were selected and capacitated in goat farming, pig farming, poultry farming, buffalo farming, homestay management, tea-shop, tree house, tailoring center, beauty parlor, and motorcycle workshop operation businesses.

GENERAL HEALTH

NTNC continues to ensure access and provision for basic health services to far-off remote communities. In the mountains our interventions are focused in the trans-himalayan areas of Manang and Lomanthang of ACAP region. In the Tarai , we focus on poor communities in Bardia. Health services provided include administering general checkups, prescribing medicines, offering counselling and advice. In addition to locals, these facilities also support trekkers. Over 5600 persons benefited from our health centers, clinics and camps this year.

- In ACAP region, 2,350 locals (F: 1,299, M: 960) and 35 foreign tourists received general health services from our facilities in Manang and Lomanthang. More than 50 kinds of health problems were diagnosed in the process, common among them being, acute mountain sickness, fever, joint pain, acute respiratory infection, cough, diarrhoea, dermatitis, gastritis, eye infections, headache, hypertension, sinusitis, wound infection, among others. Focusing on the elderly, we organized door-to-door health services reaching out to 87 households.
- In Bardia, 3288 people (M: 1162, F: 2126) took support from the health center located in Banjariya, in the western buffer zone area. NTNC-BCP has been supporting the center for many years to ensure basic health services, with specialist services being made in collaboration with Bheri hospital in Nepalgunj. Common services this year were general checkups, family planning, tuberculosis examination and treatment, and lab tests.







CLIMATE CHANGE

Nepal continued to recover from the COVID-19 pandemic in 2022, with finances in most sectors still being hard pressed, including for NTNC. Meanwhile, the country continued to face challenges from extreme weather events and natural disasters, resulting in loss of life and property.

National priorities to capitalize on international funding to tackle the increasing burden of climate change has become more necessary than ever for an LDC country like Nepal. NTNC, as a Direct Access Entity (DAE) of the Green Climate Fund (GCF) has the capacity to streamline funding gaps and make important contributions to the country's climate finance needs. Currently, NTNC is developing bankable proposals that are aligned with national priorities, while continuing to be actively involved in implementing a variety of adaptation-based measures, focusing on resilience-building of the most vulnerable communities.

NTNC's work in climate change supports vulnerable communities toward ecosystem-based adaptation and nature-based solutions. Our projects and programs are streamlined in accordance with priorities set forth by the National Adaptation Plan (NAP), Nationally Determined Contribution (NDC), National Climate Change Policy, among others.

On the ground, our initiatives make direct positive contributions toward local green-based economic opportunities, skills development, capacity building, and DRR preparedness. We work closely with local communities in safeguarding traditional occupations, exploring new alternatives, and promoting climate-friendly livelihoods. To combat the impacts of climate change-induced hazards, NTNC actively promotes climate-proofing measures for rural infrastructure. Likewise, we have been working with local communities for decades in planting indigenous trees and promoting clean energy technologies.

Currently we are working on developing an Action Plan for integrating Gender Equality and Social Inclusion (GESI), aligning with the NDC targets. We are also mainstreaming and operationalizing a sustainable river basin approach for watershed management which will be critical for enhancing the resilience of both vulnerable communities and ecosystems, given the rise in climate-induced hazards like floods, landslides, and droughts in recent years.

Our work moving forward will prioritize adaptation-based capacities of vulnerable communities, while critical ecosystems will be assessed and managed to enhance resilience. We will continue to emphasize on mitigation-related initiatives through carbon footprint reduction and sequestration capacities. All this so as to ensure a sustainable and resilient future for Nepal's communities and ecosystems.

Green Climate Fund

NTNC is among the only two nationally accredited Direct Access Entities (DAE) in Nepal to the Green Climate Fund. GCF is the world's largest global fund for climate change, established by the United Nations Framework Convention on Climate Change (UNFCCC), to provide financial assistance to developing countries in meeting their climate actions under the Paris Agreement. The decision for accreditation was made by the 27th Board meeting of the GCF held on 9 to 13 November 2020. DAE accreditation has authorized NTNC to develop individual projects up to USD 10 million for accessing future climate finance directly from the GCF under the 'micro size' category. Under this NTNC will undertake climate actions that focus on climate change mitigation and adaptation targeting vulnerable rural communities to build climate resilience and local capacities, while promoting socio-economic opportunities necessary to cope and combat climate-induced risks. With the entity work plan in place, NTNC is preparing projects streamlined with the national priorities.

Towards Project Inception

NTNC is currently implementing the GCF funded project 'Improving climate resilience of vulnerable communities and ecosystems in the Gandaki River Basin, Nepal'. IUCN is an implementing entity for the project, with the Ministry of Forests and Environment, Department of Forests and Soil Conservation, and NTNC as executing entities. The national project inception workshop was organized in Kathmandu on July 08 2022 to familiarize national-level stakeholders with the project strategy together with participants from government, civil society organizations, private sector, academia, and the media.

The project will focus on enhancing the climate resilience of vulnerable communities and ecosystems in the 19 districts of the Gandaki River Basin, which is a grouping of areas highly vulnerable to the impacts of climate change. The project has three major components, Community resilience, Ecosystem resilience, and Climate governance. The total project cost is USD 32.715 million, with GCF providing USD 27.4 million in grant, and the remainder in co-financing from the Ministry of Forests and Environment, NTNC, and IUCN Nepal.

Moving forward, NTNC will push its DAE accreditation scope further to create lasting climate change mitigation and adaptation capacities. Through GCF-led opportunities, we anticipate developing more bankable projects that are critical to realize a green, sustainable and resilient future for Nepal's most vulnerable communities and ecosystems.



AFFORESTATION

Forest cover expansion this year comprised over 42,000 seedlings of 45 species planted across NTNC working areas through private and community plantation initiatives covering an area of around 26.40 ha. NTNC continues to promote enhancing green coverage quality focusing on local species that improve ecosystem resilience and functioning, protect wildlife habitats and restore degraded lands, contribute to carbon sequestration, as well as support local livelihoods. Overall our approach ensures forest coverage expansion and ecological integrity go together with socio-economic benefits.

CLEAN ENERGY PROMOTION

Mountain communities rely heavily on firewood for cooking, heating and boiling. To reduce firewood dependence NTNC has been successfully implementing its clean energy promotion program for many years, where we promote and support alternative energy capacities in high mountain communities. This year we supported communities in Manang with installation of 7 back boilers and 3 solar water heaters, including repair and maintenance support for 5 solar water heaters, and free supply of fitting tools for heating units already installed with our support in the past.



These are important initiatives for reducing pressure on forest resources while meeting household energy needs, which tend to be higher in the mountains given the cold temperatures coupled with limited fuel wood availability. Promoting clean and energy-efficient technologies become even more warranted here, given extreme climate sensitivity and vulnerability of mountain ecosystems and people.

DISASTER RISK REDUCTION AND PREPAREDNESS

- Community and park infrastructure support focusing on risk reduction and resilience building continues to be an important focus on NTNC. This year, two wooden bridges were built, one in GCAP region to support daily activity of local communities, and another on the fire line from Baguarphanta to the Gaidamachan post in Bardia NP to facilitate the movement of patrolling personnel and vehicles.
- 39 buffer zone community forest user groups were supported on community initiatives to take early action for forest fire control. Campaigns focusing on forest fire preparedness and response capacities were reached out to more than 3000 community members in the process.



URBAN ENVIRONMENT AND POLLUTION CONTROL

Waste management practices and capacities among host communities, especially in remote and touristic destinations, have long term consequences on local environments and conservation outcomes. On the other hand, expanding road network into rural spaces has given rise to increased flow of packeted products and consumer goods, creating litter and making pristine spaces in nature increasingly prone to waste and pollution.

NTNC works with the local communities in solid management initiatives, especially in community settlements, tourist destinations and along trekking routes. To reduce plastic flow inside conservation areas, 29 safe drinking water stations in ACAP region have been set up. Overall we aim to enable communities reach their full potential as eco-tourism destination hosts, focusing on each of their cultural particularities.

This year we continued to support solid waste management of Tsarang and Lomanthang villages in Upper Mustang, where women's groups take particular leadership. Through this mechanism household waste collection and transportation is done twice a week allowing the natural pristineness of the area to remain intact. Such facilities ensure the integrity of remote and fragile environments through community-led initiatives.

LIVELIHOOD SECURITY

Agriculture and livestock is a mainstay for majority of households living in and around protected areas. In the conservation areas that NTNC manages, project demonstration plots are set up to support farmers with seedlings, tools, techniques and practical solutions to enhance farmer's resilience to changing temperatures, diversifying farming capacities and output. Such facilities have a significant role, especially for subsistence-level farmers living in remote



conditions and for building food security, self-sufficiency and overall community resilience. In addition to agriculture support, our livestock and veterinary initiatives continues to make a difference in the lives of many, ensuring that small farmer's basic livelihood support systems remain resilient. This year livelihood support focusing on vulnerable farmers covered;

- In ACAP region, 11,630 seedlings of 20 types of off-seasonal vegetable were grown and distributed to 517 households from our demonstration nursery plots, along with agri tools. In MCAP region, 200 households were provided with 19 varieties of vegetable seeds,

along with water mills installed in two villages, as an alternative to the energy-intensive traditional wooden mills used for flour making.

- NTNC-led livestock health initiatives treated over 26,000 livestock, providing treatment services, medicines and consultations for varying livestock conditions faced by small farmers. A total of 16 livestock health clinics and local veterinary centers were supplied with livestock medicines based on demands of local goat farmers.

As part of the project “Tigers in Nepal: Preparing for the impacts of climate change”, we worked with the Hattidamar Ghuiyabari BZUC of Banke National Park, whose members rely predominantly on agriculture and livestock. Our livelihood security interventions were focused on preparing communities to the south-north movement of tigers due to future habitat shifts caused by changing climate conditions. Increasing habitat shift of tigers to high altitudes is anticipated to give rise to human-wildlife conflict among farming and forest-dependent communities. Vegetable farming and animal husbandry trainings were organized for 65 farmers focusing on developing professional capacities and market linkages. Besides the trainings, we provided vegetable seeds and plastic tunnels, six electric brush cutters and mini tillers for improving agricultural productivity to 10 farming groups and cooperatives. Likewise we supplied 17 agriculture groups with veterinary medicines, 12 male goats to improve cross-breeding, along with two castrators.





RESEARCH & KNOWLEDGE

Scientific research has been one of the biggest strengths of NTNC along with our ability to disseminate evidence-based knowledge to policy makers and global scientific community. NTNC's long experience on the ground has attracted large numbers of scientists and partners from both home and abroad, working as a useful platform for collaboration in science and innovation. NTNC's scientific work has led to the recording of new species and knowledge for Nepal and the global conservation community. Every year, NTNC has been making significant contributions to academia through publishing quality scientific papers in peer reviewed journals that not only deal with wildlife per se but also deal with subjects related to habitat and ecosystem management, human-wildlife co-existence, tourism and culture, people and economy. Importantly, NTNC supports the GoN's efforts in the national tiger count and rhino count among many other scientific initiatives as a key scientific partner. With keystone species recovering, there is still a lot to be understood about lesser known species and diversify our research focus. Navigating through the complexity of nature and species, it is imperative for us to strengthen our research capacity in wildlife genetics, health and disease that guide our conservation actions. This year, our research highlights are as follows.

PEER REVIEWED PUBLICATIONS

Continuing to make notable contributions from Nepal to the body of conservation science and knowledge, NTNC researchers authored/co-authored 12 peer reviewed articles this fiscal year. Besides this, we also provided research support to more than 25 institutions and individuals, for pursuing various scientific studies related to conservation ecology and wildlife sciences.

1. Regmi PR, Chetri M, Acharya H, Sigdel P, Adhikari D, Subedi N & Lamichhane BR. (2022). First camera trap record of Striped Hyena *Hyaena hyaena* (Linnaeus, 1758)(Mammalia: Carnivora: Hyaenidae) in Parsa National Park, Nepal. *Journal of Threatened Taxa*, 14(7), 21396-21401.
2. Mishra R, De longh HH, Leirs H, Lamichhane BR, Subedi N & Kolipaka SS. (2022). Fishing cat *Prionailurus viverrinus* distribution and habitat suitability in Nepal. *Ecology and evolution*, 12(4):e8857.
3. Thapa SK, de Jong JF, Hof AR, Subedi N, Joshi LR, Prins JJT. (2022). Fire and forage quality: Postfire regrowth quality and pyric herbivory in subtropical grasslands in Nepal. *Ecology and evolution*, 12: e8794.
4. Baral R, Ghimire Y, Neupane B, Lamichhane BR, Bhattarai S & Shah KB. (2022). Photographic evidence of the Large-toothed Ferret Badger *Melogale personata* in the Annapurna Conservation Area, Nepal. *Journal of Animal Diversity*, 4(1) (In press).
5. Paudel RP, Kadariya R, Lamichhane BR, Subedi N, Sashika M, Shimozuru M & Tsubota T. (2022). Habitat occupancy of sloth bear *Melursus ursinus* in Chitwan National Park, Nepal. *Ecology and evolution*, 12(3):e8699.
6. Thing SB, Karki JB, Lamichhane BR, Shrestha S, Regmi UR & Ranabhat R. (2022). Distribution and habitat-use of Dhole *Cuon alpinus* (Mammalia: Carnivora: Canidae) in Parsa National Park, Nepal. *Journal of Threatened Taxa*. 14(3):20703-12.
7. Ram AK, Yadav NK, Subedi N, Pandav B, Mondol S, Khanal B, Kharal DK, Acharya HB, Dhakal BK, Acharya KP & Baral HS, Dahal BR, Mishra R, Dahi D, Pradhan NMB, Natarajan L & Lamichhane BR. (2022). Landscape predictors of human elephant conflicts in Chure Tarai Madhesh Landscape of Nepal. *Environmental Challenges*, 7:100458.
8. Thapa S, Dahal DR, Ghimire R, Baral R, Yadav B, Lamichhane BR, Dahal BV, Poudyal L, Yu W & Yi W. (2022). Occurrence of bats in protected areas of Nepal: An update on species richness and distribution records. *Nepalese Journal of Zoology*, 5(2):68-85.
9. Yadav SK, Lamichhane BR, Subedi N, Acharya HB, Macdonald DW, Fitzmaurice A. Rusty-spotted cat *Prionailurus rubiginos* (I. Geoffroy Saint-Hillaire) camera trapped in the Bardia-Banke complex of Western Tarai Arc Landscape, Nepal. *Journal of Animal Diversity*, 3(4):49-55.
10. Lamichhane BR, Lamichhane S, Regmi R, Dhungana M, Thapa SK, Prasai A, Gurung A, Bhattarai S, Paudel RP & Subedi N. (2021). Leopard (*Panthera pardus*) occupancy in the Chure range of Nepal. *Ecology and Evolution*, 11(20):13641-60.
11. Lamichhane S, Lamichhane BR, Pokharel K, Regmi PR, Dahal TP, Bhattarai S, Pokheral CP, Gotame P, Rayamajhi T, Kandel RC & Gurung A. (2021). Birds of Barandabhar Corridor Forest, Chitwan, Nepal. *Journal of Threatened Taxa*, 13(11):19509-26.
12. Shrestha B, Lamichhane BR, Prasai A, Shrestha A & Shrestha S. (2021) Assessment of Nature Guide's Perception Towards Biodiversity Conservation in Chitwan National Park Using Knowledge, Attitude and Practice (KAP) Approach. *Journal of Environment Science*, VII: 61-73.

OTHER RESEARCH INITIATIVES

Biological Survey in Marbu, Lapchi, & Rolwaling Valley

Between March and May 2022, a biological survey using camera trapping, sign survey, and other methods, was carried out for a total of 35 days in three locations of Gaurishankar CA – in Marbu, Lapchi and Rolwaling areas. NTNC-GCAP conducted the biological survey under the Norwegian Partnership Programme for Global Academic Cooperation (NORPART). The study was able to successfully report photographs of

many globally important species, including, Snow leopard, Himalayan wolf, Assamese macaque, Leopard cat, Red panda, Other prominent species recorded were Himalayan thar, Barking deer, Ghoral, Himalayan Black bear, Weasel, Civet spp, and other small mammal species.

Collaborative research for assessing biodiversity responses to PES

A collaborative research and development project was initiated between San Diego State University (SDSU) and NTNC to assess biodiversity responses to payment for ecosystem services (PES) program in Chitwan. For this, NTNC is conducting camera

trap surveys in four forest management zones – National Park, Buffer zone forest, Corridor forest and PES implemented community forests. In each zone, about 20 cameras will be kept in operation for a year. The cameras installed in southern part of Padampur and north-east of Madi in Chitwan NP, and the Barandabhar corridor forest and PES forests of Kalika, Khairahani and Rapti municipalities, will help provide useful insights and data for understanding biodiversity and PES relations better, especially for protected area managers.

Assessment of invasive species impact

Research was conducted to assess the impact of alien plant species (IAPS) on the native biodiversity of Shuklaphanta NP. We assessed the entire area of the park, following which data analysis is ongoing. The research is expected to come up with some interesting findings on the diversity and distribution of IAPS in ShNP together with their impact on native plant species, and wildlife-habitat utilization patterns.

Baseline socio-economic survey to identify IWT vulnerable households

was conducted in BNP and BaNP. In total 3,205 households belonging to different socio-economic attributes from the northern buffer zone were surveyed. Preliminary data findings show that the majority of households surveyed are forest dependent, with agriculture, animal husbandry and daily wages/labor making up the primary income sources in people's everyday lives. Completion of documentation and analysis of the socio-economic survey will help to clearly identify community vulnerability levels to IWT and establish project interventions accordingly.

Grazing pressure survey

A survey to understand grazing pressure survey was conducted along the fringe areas of Shuklaphanta NP. The research team of NTNC-SCP focused on the entry points of domestic livestock into the park area, in the process counting every individual livestock entering the park, together with associated information on the type of livestock, management measures taken, etc. A similar survey was conducted in 2015. Following this, a comparative analysis of both the year's data will be done. Findings of the survey will

provide important management recommendations to the park authorities for future management of livestock grazing pressure inside the park in the future.

KNOWLEDGE & LEARNING

Field training course on Applied Ecology

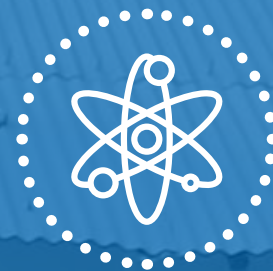
NTNC conducted a three-month international-level field-based training course on Applied Ecology, wherein a total of 12 Master's students (8 from Inland Norway University of Applied Sciences and 4 from Kathmandu University) took part. The training was organized as part of the NORPART project – a five-year capacity-building project jointly organized by the Inland Norway University of Applied Sciences (INN), NTNC, and Kathmandu University.

Having completed the training, which was conducted in Chitwan National Park and Gaurishankar Conservation Area, students would receive 15 ECTS credits for their master's course in Applied Wildlife Ecology. During the training, students got to build their understanding on how to effectively design wildlife ecological studies, collect and analyze data using various tools and techniques, and write a scientific report based on analyses of the collected data. The fieldwork included use of camera trapping, fecal sampling, and sign and transect surveys to investigate densities, distributions and activity patterns of various mammalian carnivores. The students were also trained in sampling and analytical methods to study diets and genetics of mammal species, along with being familiarized about current issues in Nepal's wildlife conservation, through lectures and field sessions conducted by experts.

Short training course on basics of wildlife identification and rescue

was organized for 15 different Divisional Forests from all over the country to standardize procedures and protocols during wildlife rescue operations and overcome knowledge gaps in the field. The four-day training was organized in collaboration with the Department of Forest and Soil Conservation aiming to enhance the capacity of frontline staffs of Division Forest Offices, like forest guards and rangers, who are frequently involved in wildlife identification, rescue and care.





EDUCATION & OUTREACH

Education extension and outreach have far reaching impacts for creating conservation awareness in communities and individuals. It is in our individual actions that our collective outcome depends, which continues to affect the society and environment. A good conservation initiative is able to educate, inspire and move individuals to be responsible citizens by acquainting with environmentally-friendly attitudes. From this viewpoint, NTNC's conservation education and outreach programmes are targeted namely at three groups: First are the youths, comprising mostly school students, who we perceive as primary guardians of nature; second are the local communities who live in and around PAs, whose daily decisions and actions directly affect nature; and then there is the larger society, whose support and increased responsibility we continually seek. All this we believe is necessary for advancing the roles of individuals, communities and the larger society to do more for nature.

SCHOOL-FOCUSED CONSERVATION EDUCATION AND OUTREACH

As part of our efforts in expanding environmental awareness and action at the local level, with a special focus on youths and students, NTNC has been implementing its conservation education classes since the past two decades. Here we have designed and implemented our very own school-based conservation curriculum 'Prakriti ko Sandesh', with dedicated teachers for students of grade 6, 7 and 8. Besides formalizing conservation curricula in schools, we also maintain a vibrant network of youth-based Green Force Clubs and Eco clubs, who initiate various conservation engagements and activities, at both the school and community levels, all year round. This year, more than 10,000 children at schools were directly reached through our education and awareness-building initiatives.

- Conservation education classes through our school-level course books 'Prakriti ko Sandesh' (Voice of Nature) was taught in 101 schools

this year directly benefitting more than 6000 students in the Annapurna, Manaslu and Gaurishankar conservation areas.

- Green Force Clubs (GFC) continued to be supported and actively mobilized across all of NTNC's supported schools in ACAP, MCAP and GCAP regions. Throughout the year, each of the more than 100 school-based clubs conducted conservation dramas, speaking programs, drawing competitions, essay competitions, celebrated special days, undertook environmental campaigns, and plantation programs, and helped disseminate conservation-related messages in the wider community.
- In the Tarai protected areas: 48 school-level awareness and support programs were conducted among 2135 students studying in Bardia NP buffer zone areas; we conducted awareness sessions in collaboration with local academic organizations for 557 students from 17 different schools of Chitwan; Dolphin, Bengal Florican and Gharial conservation



education programs were conducted for more than 650 students from 7 schools in Koshi Tappu Wildlife Reserve.

- > 12 special day conservation events celebrating important wildlife, conservation, culture and heritage occasions were organized involving more than 12,000 protected area community members across NTNC's working areas, with majority participation coming from schools and community youths, women groups and community leaders.

COMMUNITY LEVEL AWARENESS PROGRAMS

NTNC's community outreach initiatives are mainly targeted around those living in the fringes of protected areas. Our efforts aim to help local people understand the benefits of conservation and ecosystem services better, build collaborative capacities and actions that benefit wildlife and people together, and enhance individual ownership and responsibility for local environments. To do this we organize mass community-level campaigns to small-level interactions, workshops and exposure tours, along with engagements that regularly educate and empower communities to take positive actions for conservation and their own futures. This year, with the increasing incidents of tiger attacks on humans, especially in the Bardia-Banke complex, most of our community awareness programs were targeted on building human-wildlife coexistence knowledge and behaviors.

For building community-level human-wildlife coexistence awareness...

- 33 mass community awareness sessions on conservation knowledge on various target species, problematic animals, especially tigers and elephants, their behaviors, avoidance and preparedness strategies to adopt, and knowledge about procedures for communities to be compensated during human-wildlife conflict incidents, were organized in the buffer zones of Bardia, Banke, Chitwan and KTWR.
- Six drill simulation programs on human-tiger coexistence were conducted for 336 local residents of Bardia and Banke NP buffer zones, among which more than two-thirds of participants were women.
- Nine interaction workshops focusing on minimizing human-wildlife conflict in buffer zone areas was organized among 587 local stakeholders of Bardia and Banke NP.
- Training for local resource persons on human-wildlife coexistence was conducted over a period of three days in Chitwan focusing on application of wildlife safety measures, crowd management during rescue operations and ensuring community cooperation for biodiversity conservation.
- Two interaction programs involving 52 local journalists of Bardia was organized to develop better clarity and media covered on biodiversity conservation issues and initiatives, human-wildlife conflict mitigation measures, and anti-poaching operations.
- 27 hoarding boards with education messages about human-tiger conflict minimization through proper use of game proof fencing and predator-proof corral houses, and adopting behavioral safety measures to avoid tiger attacks, were installed in six BZUCs of Bardia, this being in addition to bird and elephant conservation awareness hoarding boards.
- Art paintings and laminated boards to educate local communities and students with tiger conservation and conflict mitigation messages were put up in 9 strategic locations next to Bardia NP – 6 community buildings, two schools and one traditional platform.
- A radio program titled "Nikunja Serophero" was broadcasted on local FM, Radio Tiger 99.2 in 24 parts throughout the year focusing on community-level human-wildlife conflict mitigation, preparedness and safety practices in Bardia NP.



- 10,000 posters with conservation messages on tigers, rhinoceros, elephants, and smooth-coated otters were designed, printed and distributed among schools, communities and local stakeholders in Bardia, Banke and Chitwan national parks.

Community exposure tours aimed at enabling cross learning and knowledge of best practices are an effective tool for enhancing local leadership for conservation and community development. This year:

- A four-day conservation tour was organized for 28 community leaders from four BZUCs in Banke and Bardia. Tour participants observed goat farming in Rupandehi, cultural tourism in Lumbini, a homestay in Nawalparasi, eco-tourism in the Baghmara buffer zone community forest, and other livelihood and conservation initiatives in Chitwan.
- 9 members from the BZMC in Banke visited Bardia National Park, 10 members of the women's environment subcommittee visited Shukhlaphata National Park, and 20 community members from Shreeramnagar BZUC in Bardia visited Rara National Park as part of facilitating cross learning opportunities.

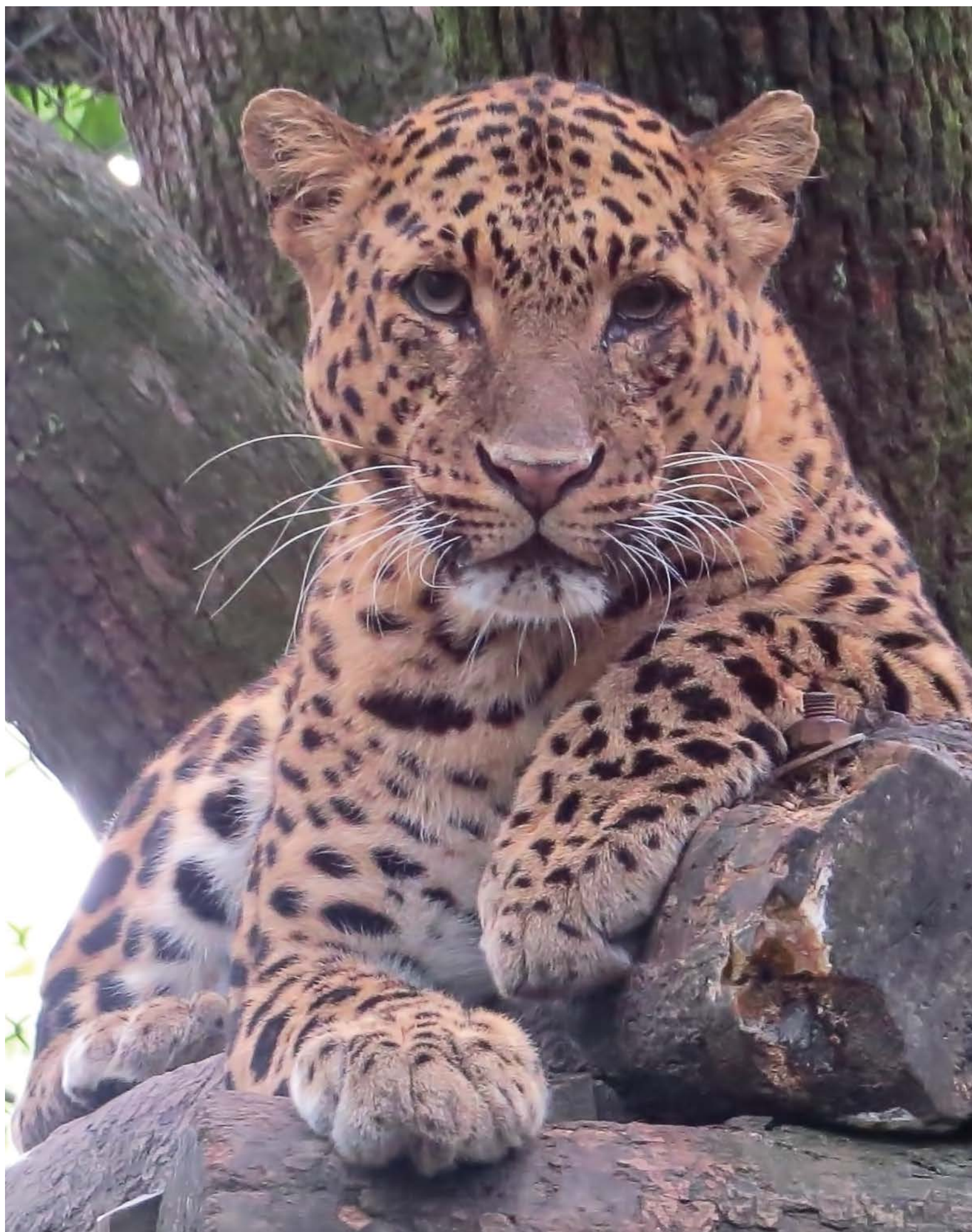
Public education and outreach facilities

- **Wildlife Information and Display Center**, at the NTNC-BCC premises in Sauraha, received a total of 43,947 visitors this year, out of which 10,500 were international visitors. The center, which has more than 250 specimens of diverse wildlife found in Nepal, continues to be an important facility for imparting conservation education and learning.
- **Tharu Cultural Museum** located inside the Bardia NP premises, and managed by NTNC, continues to be an important facility for promoting traditional knowledge and conservation practices focusing on the socio-cultural attributes of the indigenous Tharu community. This year the museum received 57,066 visitors.
- **Annapurna Natural History Museum** in Pokhara, which is managed by NTNC-ACAP, provided engagement and learning opportunities for 1800 visitors. The comparative lesser number of visitors was due to the facility being closed off for the majority of the year. The museum is particularly known for its butterfly collection, with 587 butterfly specimens. This year we added three more species to the collection.

Transboundary conservation outreach and engagements

- Three transboundary conservation meetings were organized between authorities, stakeholders, and communities of Shuklaphanta NP and Pilibhit Tiger Reserve, India (2 in ShNP and 1 in PTR)
- A transboundary tour was organized for 10 officials of Bardia NP, DFO Bardia and conservation partners to India's Pilibhit and Corbett Tiger Reserves to observe the various management practices in the Indian protected areas, which share many similarities with Nepal's Tarai region.







CENTRAL ZOO

The 90 years old heritage of the country, Central Zoo certainly is the oldest city-centric ex-situ conservation centre invigorating the essence of history and culture. Established as the private collection of late Prime Minister Juddha Shumsher JBR, the Government of Nepal formally handed over the management responsibility of the Zoo to the National Trust for Nature Conservation (NTNC) for 30 years in December 1995. NTNC envisions establishing the Zoo as a Centre of Excellence for Conservation Education and wildlife research within the given ideology of a modern zoo philosophy and to make the zoo financially sustainable.

From the furry to the fuzzy to the feathered, the Central Zoo houses over 1000 wildlife representing 115 species, many of them endangered or threatened. With the enraging problem of human-wildlife conflict and illegal wildlife trade, Central Zoo has become a safe home for the problem, injured, orphaned and rescued animals of both native and exotic origin with an annual rescue rate of over 300 individual wildlife per year. Spanning over an area of 6 hectares and receiving about a million visitors annually, the Zoo aims to connect people to wildlife through experiences that inspire the action.

Central Zoo is a pioneer in ex-situ conservation in Nepal having seasoned human resources dedicated to animal care, nutrition, animal management, enclosure design, enrichment, animal health and welfare.



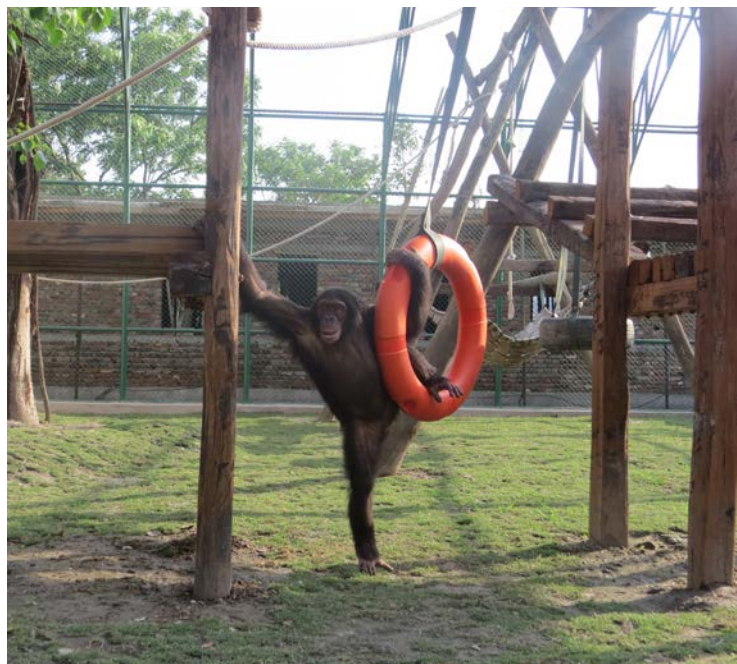
ZOO MAJOR HIGHLIGHTS

New house for Chimpanzees

This year the Central Zoo successfully housed and exhibited the first-ever pair of chimpanzees at its facility.

The Chimps are housed in a newly constructed residence which was inaugurated, coinciding with the Earth Day celebrations on April 22, 2022, by the Ministry of Forests and Environment Secretary Dr Pem Narayan Kandel together with NTNC Member Secretary Mr Sharad Chandra Adhikari in the presence of government officials and conservation partners and wildlife supporters.

The Chimpanzee house is designed to cover an area of 4,140 sq ft with three temperature-regulated furnished rooms and an outdoor garden. The holding area is equipped with toughened glass that allows for favourable visitor viewing, and the facility is enriched with extra amenities, like swings, poles and playing platforms that enable their healthy development through activities supporting their physical and emotional needs.





The new facility is the outcome of support received from the Ministry for Forests and Environment. The chimpanzees have been adopted by Raji Rana of Prabhu Shumsher Ja. Ba. Ra. and Raji Rana Trust who has also shared interest for their continued support.

The Central Zoo successfully brought the Chimps for display after nearly five years since they were first rescued by authorities from wildlife traffickers.

Enrichment activities

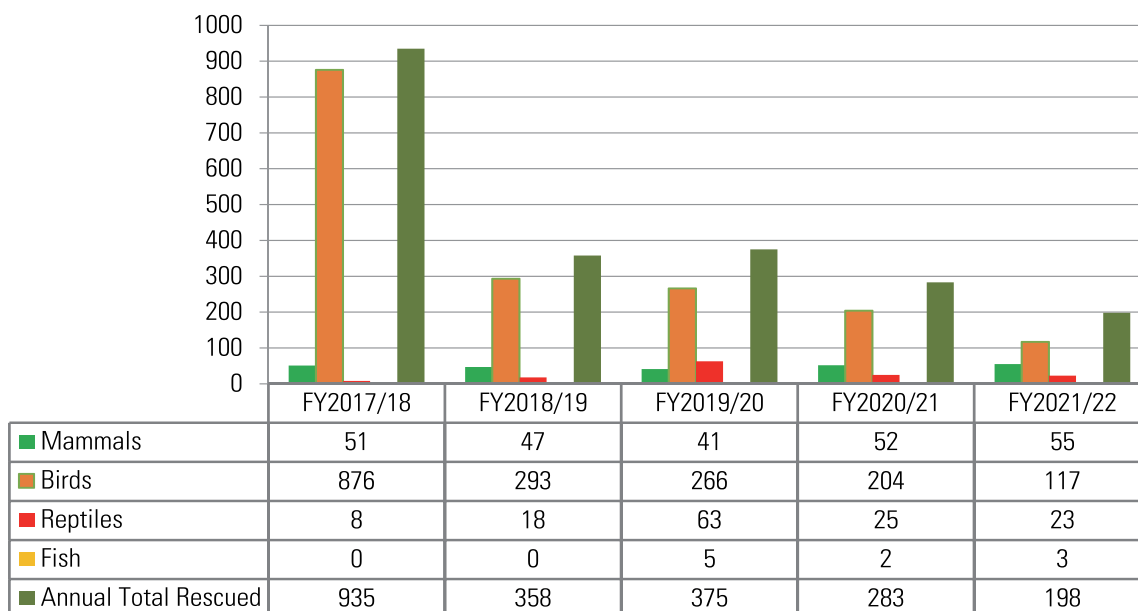
Regular enclosure enrichment for captive animals is important to enable the natural behavioural traits of animals, diversify animal activity and engagement, reduce the frequency of abnormal behaviour, and develop individual animal coping abilities. Special animal enrichment activities were carried out throughout the year focusing on the mental, physical and social well-being of more than 20 species.

Platforms are especially crucial amenities for carnivores allowing them to relax and take in views of their surroundings. They will sometimes even use the platforms to hide from other animals or to spy on their neighbours. This year, wooden platforms in Tiger, Leopard, and Bear enclosures were constructed and maintained. To promote the arboreal activity of primates, multilevel climbing structures, ropes and platforms were maintained at different heights. Likewise, an enriched environment for Chimpanzees was maintained in the new Chimpanzee house with poles, a fire hose and ropes and platforms and hammocks.

Other enrichments included the use of substrates and hiding food in substrates focusing on Primates; adding branches with leaves and grasses for ungulates; enclosure maintenance and sand levelling for Gharial basking; branches, twigs and stem added in the bird enclosures; along with special food and fun-focused enrichments carried out throughout the year to meet specific animal attitudes and preferences.



Trend of Rescue Animal by Central Zoo



Animal rescue and rehabilitation

Growing anthropogenic pressures and demands on limited natural resources have resulted in the shrinking of wilderness spaces, invariably leading to human and wildlife interactions. The Central Zoo in close coordination with forest departments have taken the lead to respond to this rapidly growing human-animal interaction challenge and stepped in to play a small, albeit significant, role in its mitigation. During this fiscal year, the zoo rescued 198 animals, belonging to 29 species, which were carried out in close coordination with Divisional Forest Offices (DFOs), Department of National Park and wildlife conservation (DNPWC), Nepal Police and local communities.

Rescued animals have their detailed clinical examinations done by the vet team with treatments being based on signs and symptoms and other diagnostic procedures. Animals are kept in quarantine for rehabilitation and are released in the wild if they are fit to hunt or forage for food. Animals deemed unfit to survive in the wild were kept in quarantine. Orphan animals are provided with intensive care and diets and are reared in the nursery area of the Central Zoo's animal

hospital. Problematic animal management tasks are undertaken following standard procedures and actions prioritizing animal welfare.

Adopt an animal campaign

On the 25th anniversary of the Central Zoo under NTNC management, NTNC successfully launched its "Adopt-an-Animal" campaign, which was timed to coincide with World Wildlife Day on March 03, 2021. The campaign built momentum this year with the support of animal lovers and Central Zoo's well-wishers. The program is a novel initiative to directly connect public sentiments with zoo animals and build solidarity for conservation. It is intended to reach a wider audience, taking the zoo's work and passion for animals across individuals and networks. Association of reputed corporate groups and figures like Laxmi Bank, Dr Sundar Mani Dixit, and former Chief Justice Cholendra Shumsher JBR has helped in popularizing the campaign, with government entities like Nepal Telecom also committing long-term support. A total of 89 individuals and organizations have adopted 107 individual animals as part of the campaign.



To popularize and promote the campaign among young Friends of Zoo (FOZ) members, a virtual knowledge-sharing session was organized for 437 FOZ students from different schools in Kathmandu Valley.

ANIMAL MANAGEMENT

Animal feeding program

The Animal Feeding program is one of the most popular programs of the Zoo. The program is designed for FOZ members to directly experience and learn about the feeding behaviours of wild animals and how the zoo ensures a naturally balanced diet in captivity. This year a total of 520 students from 15 schools participated in the program. We also provided virtual classes to school students focusing on the science of animal feeding along with video documentary lessons. Pre and post-survey were also conducted for every session to understand the effectiveness and feedback of the program.

Dana aahara

Feedstuff provision (Dana Aahara) following modern zoo husbandry guidelines was made for

the entire zoo collection on a daily basis for more than 1000 animals of 115 species. Balanced nutrition and energy needs of zoo animals are implemented following natural food habits, behaviors exhibited, oral and GI tract morphology, nutritional research on exotic species in the wild and captivity, body conditioning and physiological status of animals. Provision for different foods and feedstuffs was made by contracting suppliers for grains, meat and fish, fruits, vegetables and fodder. To fulfil nutritional requirements, mineral mixtures are also added to animal diets, with vegetables and fruits being routinely disinfected.





Animal health

Regular monitoring of the health status of animals, different diagnostic procedures and treatments, and applying high biosecurity and preventive measures carried out ensure good health outcomes for animals at the Central Zoo. These result in reduced animal morbidity and mortality rates. A nature-specific nutritious diet with extra supplementation of vitamins and minerals, and different enrichment activities were important support actions taken. Disease diagnosis was done for suspected sick animals and different viral, bacterial, parasitic and fungal infections were treated. Isolation, quarantine and treatment of infectious disease suspected animals were done and rescue animals were kept in quarantine to minimize the risk of spreading diseases. Routine hoof trimming, nail cutting and rearing activities of different animals were regularly performed.

Animal treatment

Medical and surgical interventions for the zoo's resident animals, including for rescued animals, are carried out routinely at the Central Zoo. Accordingly, animal signs and symptoms, post-mortem examination and other diagnostic procedures are followed.

This year, the treatment of different internal and external parasites was completed. Previously

deworming of animals used to be done twice a year. Due to faecal examination, morbidity and mortality of animals through internal parasites, deworming was done thrice this year.

Unlike domestic animals and pets, wild animals tend to suppress their signs and symptoms to be safe from other animals in the same group or from predators, invariably causing sudden deaths to occur. In such conditions, a necropsy or post-mortem examination is a crucial diagnostic tool to identify the cause of death, wherein if any infectious disease is found, medication is done accordingly. Preventive measures like regular deworming, following high biosecurity measures, regular health inspection, and use of liver- tonic, immune-modulators, multi vitamins and multi-minerals were some of the routine medical interventions made this year.

Nursery and quarantine management

To optimize the good health condition of animals, proper care, disease diagnosis and treatment of different sick and injured animals were done in nursery and quarantine. Animals kept at nursery and quarantine require special attention and regular observation. Infectious disease condition in one animal can be a serious risk for the whole animal group or flock. Therefore timely identification and separation of animals, and disease diagnosis and treatment tasks were duly performed. Orphan animals were supported with close care, diet and health needs. Four animal transfer carriers and poultry feeders and poultry drinkers were added this year to the zoo's quarantine facility.

Conservation breeding

Captive breeding, also known as conservation breeding, enables the Central Zoo to ensure appropriate animal exhibition without the need for new individuals from the wild. Importantly, conservation breeding ensures demographic and genetic backup to wildlife populations, and has an important role in education and research. At the Central Zoo, animals are kept in a safe and sound

Seventy six new births were recorded at the zoo this fiscal year, involving species like, Black Buck, Barking Deer, Five-Striped Palm Squirrel, Blue and Yellow Macaw, Common Langur, Rhesus Macaque, Indian Crested Porcupine, Domestic Rabbit, Domestic Pigeon, Kaliz Pheasant, Silver Pheasant, Speckled Pigeon, Fan Tailed Pigeon, Spotted Deer, Indian Pond Heron.

environment with good nutrition and enrichment activities to enhance reproductive success. The program serves as a reliable indicator of overall animal health.

Enclosure repair and renovation

Animal enclosure repair and renovation works this year included: Installation of toughened glass in the Tiger enclosure for easy viewing, construction of holding area for Graylag Goose, repair and maintenance of iron gate and chain-link in enclosure of Rhesus Monkey and Common Langur, general repair and maintenance in Bear and Leopard enclosures, pavement maintenance next to the Chimpanzee enclosure, ventilation work in the Panda enclosure, gate repair in the Jackal enclosure, wall maintenance behind the Macaw and Parakeet aviary, general repair and maintenance in the Emu enclosure, and aquarium repair.

CONSERVATION EDUCATION AND OUTREACH

One of the goals of the Central Zoo is to establish itself as a center of excellence for conservation and wildlife education. The outdoor learning approach promoted here, like many other zoo of the world, boasts an array of scientifically-proven benefits for students, from increased environmental stewardship and awareness, to improved social, academic, physical and psychological health. We subscribe to the view that lack of time outdoors can lead to many

behavioral problems and challenges, especially for youths, such as reduced attention spans and obesity. NTNC-Central Zoo has been running its conservation education program for more than two decades now, mainly focusing on the students of Kathmandu Valley and Zoo visitors. Our flagship Friend of Zoo (FOZ) program, which started in 1997 with 1500 members, today has grown into a vibrant network of thousands of students, teachers, volunteers and educators who raise awareness related to life sciences, promote actions for environmental conservation and help develop positive public attitudes for nature. The Central Zoo's conservation education and outreach program mainly targeted at youths through its FOZ school students and teachers, the public through zoo visitors, and knowledge campaigns for youths and communities outside the FOZ school network.

24 special day events dedicated to flagship species, wildlife and environment campaigns, among other important conservation occasions were celebrated this year covering mass awareness and engagements. Each of the events involve participation of thousands, where our FOZ school networks take lead. They usually feature organizing interactions and conferences, art and activism-related events, stage performances and competitions, song, dance and sport programs, and other awareness and action building exercises aimed at rallying public attention and support for important conservation issues and environmental causes.

There were 9 special day events dedicated to the conservation of flagship species like tiger, rhino, elephant, snow leopard, red panda, pangolin

This year, 6032 students from over 100 schools participated in 24 different events conducted for Friends of Zoo (FOZ) members; 1998 college/university-level students participated in conservation education classes through our on-demand classes; some 130,000 visitors were directly involved in the awareness activities organized at the zoo; 16 new schools were inducted to the FOZ program with 2908 new FOZ members added.

vulture, snake and turtle; and 15 important events campaigning for issues related to biological diversity and ecosystems, wildlife and people, culture and heritage, wetlands and water, mountains, and climate change, among a range of other environment-related issues, interactions and campaigns.

OTHER CONSERVATION EDUCATION INITIATIVE

Art & activism for climate & planet

To commemorate the Central Zoo's 26th anniversary, essay and drawing competitions were organized among 146 FOZ students. The junior essay competition's theme was "Save the forest, Save the Earth," while the senior's theme was "What would you recommend to world leaders if you were attending COP21, the world's largest gathering of world leaders to tackle developing challenges of climate change?" The competition had interesting submissions, making strong calls for climate action from world leaders. Likewise, drawing competitions were organized on the theme "Science and Innovation", and its role in the future of a warming planet.



Overseas climate conference for FOZ students

In May 2022, the Dwight Schools in Seoul and London hosted a student-led climate conference designed to discuss and promote global goals for stronger climate action. Everest English School, a FOZ member school from Nepal, attended the event, wherein four students from Grade 7 and 8 presented on the topic "The Impact of Climate Change in Nepal". Discussions were focused on the current state of the country's natural environment, its climate and biodiversity, climate change effects being already experienced, potential solutions for building climate resilience and sustainability, and eco-friendly initiatives being implemented by the government. Among various environmental projects presented at the event, all participating schools are already making concerted initiatives to reduce food waste and enhance recycling. The conference also agreed to strengthen the tree twinning campaign as a flagship partnership between Dwight London and Nepalese schools for promoting green spaces with vibrant wilderness and life-supporting ecosystem services.

FOZ climate TEDx

The TEDx Triyog High School/Countdown was organized by the FOZ environmental club of Triyog School on the topic of "Local Actions to Combat Climate Change". Six notable speakers, change makers, and educators expressed and debated views and actions points aimed at building understanding of the current climate crisis and its impact in the future. The Central Zoo shared its own experience on conservation focusing on the importance of individual and community-based actions to conserve and build ecosystem and community resilience capacities.

Zoonotic disease awareness program

A joint initiative by the NTNC-Central Zoo and the Epidemiology and Disease Control Division of the Department of Health Services organized an annual event dedicated to raising awareness

of the risk of disease emergence, spillover, and spread caused by the increased human-animal interactions. The initiative was intended to build knowledge about the increasing incidences of zoonotic diseases with FOZ members. In addition to this, an interactive program was conducted on misconceptions, statistics, and preventive and therapeutic elements of rabies along with the rise in monkeypox cases around the world and the preparedness and response strategies required.

Plantation campaign on WED

This year the zoo celebrated the World Environment Day (WED) focusing on plantation and greenery expansion. FOZ schools were called on to join the zoo's "Twinning the Tree Campaign", intended to promote tree plantation initiatives at individual household levels to combat climate change. In collaboration with schools of Chitwan Valley and Shivapuri Nagarjun National Park, the Central Zoo planted 1000 trees this year through the twinning the tree campaign. To further support the plantation drive, we organized inter-school drawing competitions among 158 FOZ students promoting the WED theme "Only One Earth".

Webinar series

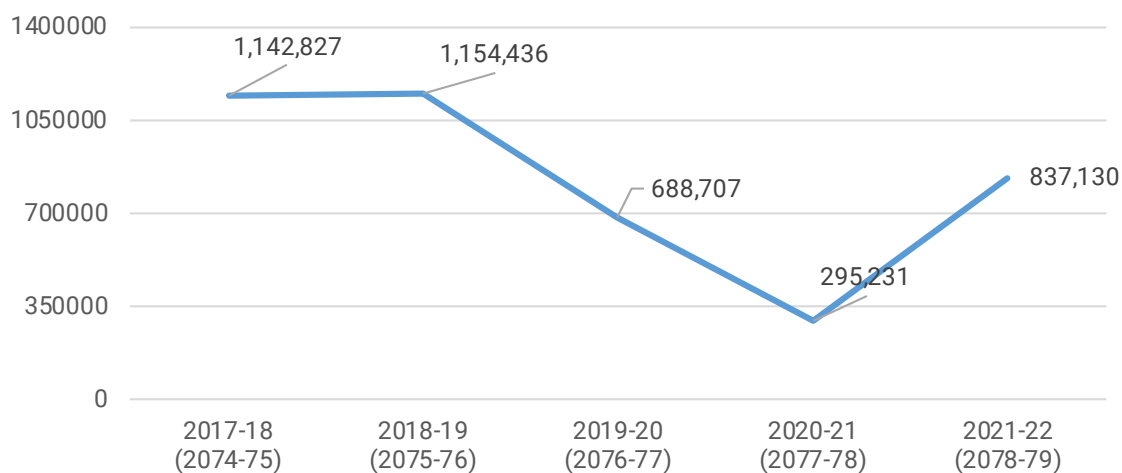
In response to requests from FOZ member schools, a series of webinars for Friends of were organized between October to December for 10 schools focusing on ex-situ conservation endeavors in Nepal, particular captive animal behaviors, their cultural importance, among other. Virtual tours about the zoo's animal feeding and day with a vet programs were also a part of this. Altogether 1250 FOZ members participated in the webinar series.

Bird identification training

To educate and engage youths in bird conservation, a total of 149 FOZ members took part in a training workshop on bird identification and counting procedures to support the 'Chhimeki Chara Campaign' (or the Neighborhood Bird Count campaign) organized by Bird Conservation Nepal.



Central Zoo five-year visitors trend



FINANCIAL STATEMENTS 2021-22 (2078-79)

For details visit link :

https://ntnc.org.np/sites/default/files/doc_page/Audited%20Financial%20Report%202021-22.pdf



महालेखापरीक्षकको कार्यालय Office of the Auditor General

बबरमहल, काठमाण्डौ, नेपाल
Babarmahal, Kathmandu, Nepal



Ref. No.: 2079/80-13.

Date: 28 June, 2023

To,
The Member Secretary
National Trust for Nature Conservation
Khumaltar, Lalitpur.

Subject: Independent Auditor's Report

Opinion

We have audited the accompanying consolidated statement of financial position of the National Trust for Nature Conservation (NTNC), which comprise the Project Financial Statements showing sources and applications of project fund as at 16 July 2022 (32 Ashadh, 2079) and for the year then ended and a summary of significant accounting policies and notes relating to the project financial reporting requirement of the project.

In our opinion, the consolidated statement of financial position give a true and fair view of the financial position of the National Trust for Nature Conservation (NTNC), as of 16 July 2022 (32 Ashadh, 2079), and of the results of its operations and its cash flows for the year then ended in accordance with accounting policy of Government of Nepal.

Basis for opinion

We conducted our audit in accordance with Nepal Government Auditing Standards (NGAS) issued by the Office of the Auditor General of Nepal (OAGN). The OAGN is an independent constitutional body mandated to conduct public sector audits in Nepal. Our responsibilities as provisioned in NGAS are further described in the auditor's responsibilities for the audit of the financial statements section of our report. We are independent of audited project in accordance with the Code of Ethics for Public Sector Auditors issued by the Auditor General of Nepal. These Codes are based on the ISSAI 130 Code of Ethics issued by the INTOSAI. We have fulfilled our other ethical responsibilities in accordance with OAGN Codes. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Management Letter

Management letter highlighting the areas of improvement for the internal control system and other aspects in this project is enclosed with this report.

Management's Responsibilities for the Financial Statements

Project management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting policy of Government of Nepal and for such internal controls as management determines is necessary to enable that preparation of financial statements that are free from material misstatement, whether due to fraud or error. Those charged with governance are responsible for overseeing the Project's financial reporting process.

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"जनहितका लागि जवाफदेहिता, पारदर्शिता र निष्ठा प्रवर्धनमा विश्वसनीय लेखापरीक्षण संस्था"

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Nepal Government Auditing Standards (NGAS) will always detect a material misstatement when it exists.

Misstatements can arise from fraud or error and are considered material if, individually or in aggregate, they could reasonably expect to influence the economic decisions of users taken on the basis of these financial statements.

As a part of audit in accordance with Nepal Government Auditing Standards, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risk of material misstatement of the financial statement whether due to fraud or error, design and perform audit procedure responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide an opinion. The risk of not detecting a material misstatement resulting from fraud is higher than one resulting from error, as fraud may involve collusion, forgery, intentional omission, misrepresentation, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Evaluate the overall presentation, structure, and content of financial statements including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the project activities to express an opinion on the financial statements. We remain solely responsible for our audit opinion.

We have communicated with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identified during our audit.



(Bindu Bista)
Deputy Auditor General

NATIONAL TRUST FOR NATURE CONSERVATION
Khumaltar, Lalitpur, Nepal

CONSOLIDATED STATEMENT OF FINANCIAL POSITION


As at 32 Ashad 2079 (16th July, 2022) Fiscal Year 2021-2022

Amount in NPR

Particulars	Schedule	Current Year	Previous Year
		Ashad 32, 2079 (Jul 16, 2022)	Ashadh 31, 2078 (July 15, 2021)
Assets :			
Non Current (Fixed Assets)	3.1	365,993,368.94	379,246,258.94
Investments	3.2	862,571,500.00	819,551,000.00
General Investment		375,332,728.52	280,409,000.00
Employee Benefit Fund Investment		467,238,771.48	509,142,000.00
Human Wildlife Conflict Management Fund		20,000,000.00	30,000,000.00
Current Assets:		216,980,381.92	174,254,483.26
Cash and Bank Balances	3.3	183,176,142.77	145,991,685.61
Advances	3.4	4,979,862.16	4,345,521.91
Accounts Receivable	3.5	28,824,376.99	23,917,275.74
TOTAL		1,445,545,250.86	1,373,051,742.20

Fund and Liabilities			
Endowment Fund	3.6	68,930,000.00	68,930,000.00
Employee Benefit Fund Payable	3.7	467,238,771.48	480,901,567.37
Staff Welfare Fund	3.7.1	17,193,386.70	17,048,871.35
Provision for Gratuity	3.7.2	361,347,165.00	377,348,064.53
Provision for Annual and Sick Leave	3.7.3	88,698,219.78	86,504,631.49
Capital Assets Fund	3.8	327,877,755.10	337,200,989.39
Exchange Equalization Reserve	3.9	279,154,444.72	261,525,938.04
Restricted Fund Balance	3.10		
Projects	3.10.1	(7,949,807.39)	(40,782,333.25)
Opening Balance upto last year		(40,782,333.25)	61,914,147.85
Add : Current year balance		32,832,525.86	(102,696,481.10)
Others (Restricted Fund)	3.10.2	87,730,506.88	77,047,467.28
Opening Balance upto last year		77,047,467.28	121,471,561.97
Add : Current year balance		10,683,039.60	(44,424,094.69)
Human Wildlife Conflict Management Fund	3.11	25,850,777.50	36,092,390.36
Opening Balance upto last year		36,092,390.36	51,430,495.99
Add : Current year balance		(10,241,612.86)	(15,338,105.63)
Accumulated Surplus:		115,605,471.52	53,820,116.80
Surplus upto Last Year		53,820,116.80	48,683,664.49
Less: Deficit adjusted in current year		-	-
Add: Current Year Surplus/(Deficit)		61,785,354.72	5,136,452.31
Current Liabilities	3.12	81,107,331.05	98,315,606.21
Current Liabilities		78,158,460.62	97,527,810.88
Non Current Liabilities (Long term liabilities)		2,948,870.43	787,795.33
TOTAL		1,445,545,250.86	1,373,051,742.20

Significant accounting policies and notes to the accounts form integral part of this statements.


BIDUR PRASAD POKHAREL
HEAD OF FINANCE


SHARAD CHANDRA ADHIKARY
MEMBER SECRETARY


BINDU BISTA
DEPUTY AUDITOR GENERAL

NATIONAL TRUST FOR NATURE CONSERVATION
Khumaltar, Lalitpur, Nepal

CONSOLIDATED INCOME AND EXPENDITURE

For The Period 01 Shrawan 2078 to 31 Ashad 2079 (16 July 2021 to 16 July 2022)

Amount in NPR

Particulars	Current Year	Previous Year
	for the year ended Ashadh 31, 2079 (July 16, 2022)	for the year ended Ashadh 31, 2078 (July 15, 2021)


INCOME :


External Sources		
Received During the Year (Restricted)	213,435,597.06	166,421,139.67
NTNC- Human Wildlife Conflict Management Fund	14,069,285.46	18,681,115.25
Internal Sources	431,207,658.93	154,069,568.81
Total Income	658,712,541.45	339,171,823.73

EXPENDITURES :

Project Expenditures (Restricted)	235,500,333.24	161,570,885.54
NTNC- Human Wildlife Conflict Management Fund	14,069,285.46	18,681,115.25
Sub Total	249,569,618.70	180,252,000.79
General Management (Internal)		
Personnel Related Cost	94,595,700.64	101,716,023.60
General Management (Administrative and Support)	102,253,469.01	51,337,178.22
Project Cost and Support	139,740,608.70	98,576,395.78
Sub Total	336,589,778.35	251,629,597.60
Total Expenditure	586,159,397.05	431,881,598.39

Total Internal Fund Surplus / (Deficit) Transferred to Balance Sheet	94,617,880.58	(97,560,028.79)
Surplus (Deficit) of Restricted Projects (ACAP & C Zoo)	32,832,525.86	(102,696,481.10)
Internal Fund Surplus / (Deficit) Transferred to Balance Sheet	61,785,354.72	5,136,452.31


BIDUR PRASAD POKHAREL
HEAD OF FINANCE


SHARAD CHANDRA ADHIKARY
MEMBER SECRETARY


BINDU BISTA
DEPUTY AUDITOR GENERAL

NATIONAL TRUST FOR NATURE CONSERVATION
Khumaltar, Lalitpur, Nepal

CONSOLIDATED STATEMENT OF CASH FLOW
For The Period 01 Shrawan 2078 to 31 Ashad 2079 (16 July 2021 to 16 July 2022)

Particulars	Current Year	Previous Year
	As at end of Ashadh 31, 2079 (July 16, 2022)	As at end of Ashadh 31, 2078 (July 15, 2021)
A. Cash Flows from Operating Activities		
Surplus/ (Deficit)		
Surplus/ (Deficit) adjusted in current year	94,617,880.58	(97,560,028.79)
<u>Adjustment for:</u>		
<u>Add :</u>		
Depreciation of Fixed Assets	5,241,545.98	6,582,954.27
Disposal of Capital Assets (Write off)	-	-
<u>Less :</u>		
Income from Investment	(54,403,744.99)	(50,149,134.66)
Other Income	(50,202,383.45)	(41,246,440.33)
Operating Surplus before Working Capital Changes	(4,746,701.88)	(182,372,649.51)
<u>Adjustment for Working Capital Changes:</u>		
Advances	(634,340.25)	907,097.25
Accounts Receivable	(4,907,101.25)	19,776,812.79
Accounts Payable	(30,871,071.05)	(58,823,558.16)
Net Cash from Operating Activities (A)	(41,159,214.43)	(220,512,297.63)
B. Cash Flows from Investing Activities:		
<u>Less :</u>		
(Additions)/ Disposal of Fixed Assets	14,013,646.00	15,553,956.86
Depreciation of Fixed Assets	(5,241,545.98)	(6,509,890.73)
Decrease/(Increase) in Investment	(43,020,500.00)	160,572,000.00
<u>Add :</u>		
Interest received from Investment	54,403,744.99	50,149,134.66
Other Income	50,202,383.45	41,246,440.33
Net Cash used in Investing Activities (B)	70,357,728.46	261,011,641.12
C. Cash Flows from Financing Activities:		
Restricted Fund Balance	441,426.74	(59,762,200.32)
Endowment Fund	-	(8,505,000.00)
Capital Assets Fund (Donation in kind on capital)	(10,083,990.29)	(9,004,148.37)
Exchange Equalization Reserve	17,628,506.68	(6,133,914.42)
Net Cash used in Financing Activities (C)	7,985,943.13	(83,405,263.11)
D. Net Increase/(Decrease) in Cash and Cash Equivalents (D=A+B+C)	37,184,457.16	(42,905,919.62)
E. Cash and Cash Equivalents at beginning of period	145,991,685.61	188,897,605.23
F. Cash and Cash Equivalents at end of period (F=D+E)	183,176,142.77	145,991,685.61
Cash comprises of Bank and Cash Balances		
Cash in Hand	398,583.06	543,888.41
Cash at Bank	182,502,799.71	145,173,037.20
Gold and Silver Coins	274,760.00	274,760.00
TOTAL	183,176,142.77	145,991,685.61



BIDUR PRASAD POKHAREL
HEAD OF FINANCE



SHARAD CHANDRA ADHIKARY
MEMBER SECRETARY



BINDU BISTA
DEPUTY AUDITOR GENERAL



NATIONAL TRUST FOR NATURE CONSERVATION

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CONSERVATION PARTNERS FOR 2022



Special appreciation goes out to all protected area community members and local leaders in the Annapurna, Manaslu and Gaurishankar Conservation Areas, buffer zone communities in Chitwan, Parsa, Banke, Bardia and Shuklaphanta National Parks, in Koshi Tappu Wildlife Reserve, whose day-on-day roles in conservation behind the scenes remains invaluable.



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