



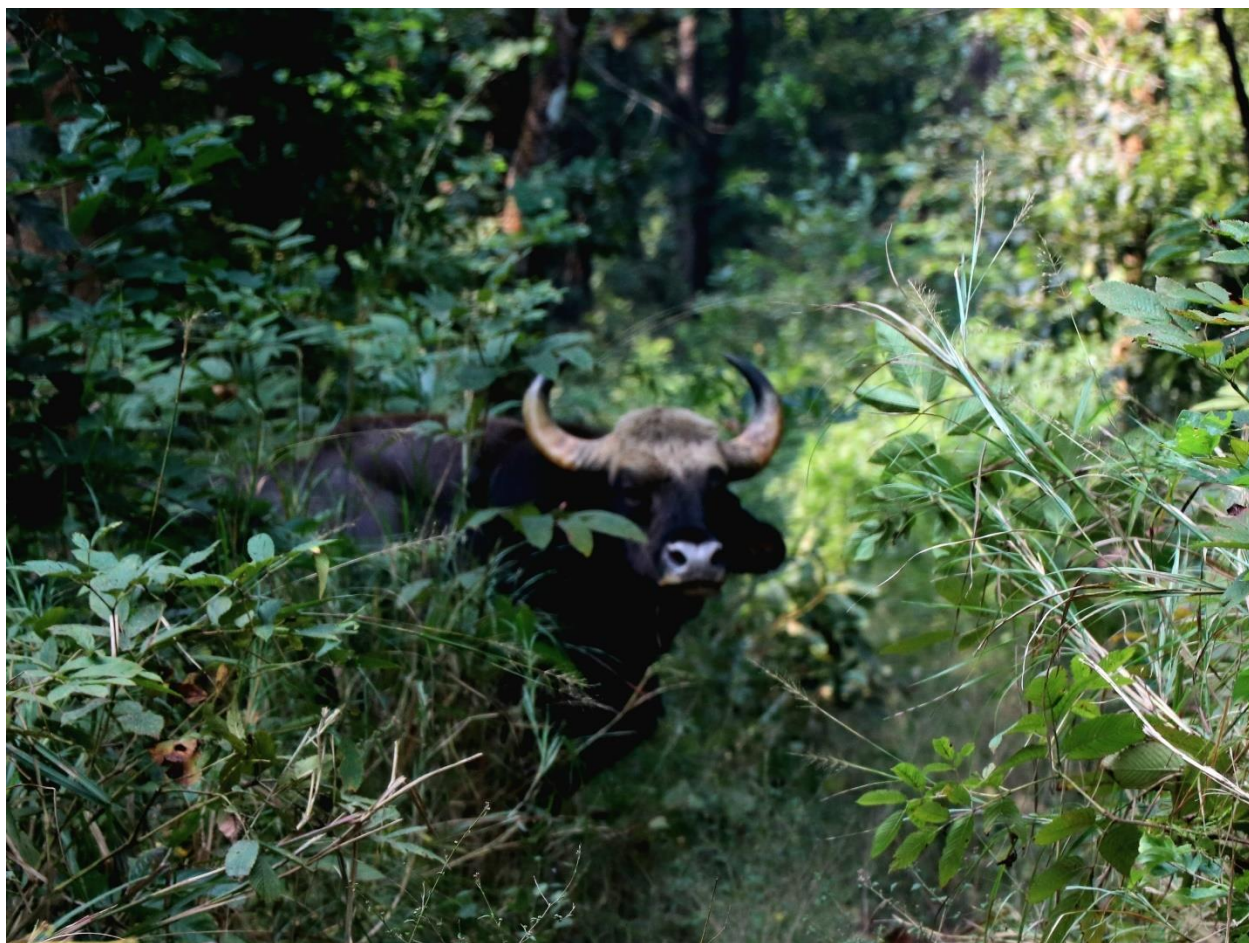
# **Management Plan of Parsa National Park and its Buffer Zone**

**FY 2080/81-2084/85 BS (2023/24-2027/28)**



**Government of Nepal**  
**Ministry of Forests and Environment**  
**Department of National Parks and Wildlife Conservation**  
**Parsa National Park Office**  
**Aadhavar, Bara**





**Management Plan of Parsa National Park, and its Buffer Zone, FY  
2080/81-2084/85 BS (2023/24-2027/28)**

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**Cover Photo:** PNP, Bara

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Date: 2080/05/29

## Foreword

Parsa National Park was established in Jestha 08 2041 (May 21, 1984) as a Wildlife Reserve with the aim of preserving Wild elephant and to provide extended habitat for tigers and rhinos. The Buffer zone was declared on Ashad 13, 2062 (June 27, 2005) providing additional layer of protection to the core area and to meet the demand of local people's need of forest products. The status of the Reserve was changed to the National Park (NP) on Ashad 19, 2074 (July 03, 2017) after the extension of the reserve towards east covering biodiversity hotspots and Halkhoriya Daha (wetland). It is expected to flourish tourism and contribute to economic development of local people.

We are pleased to present the management plan of Parsa National Park and its Buffer zone which is a result of extensive study, collaboration, and stakeholder engagement. This plan is an outcome of wider consultations with concerned and varied stakeholders having responsibilities of contribution for the management, protection and wise use resources. In this regard, I would like to acknowledge the support extended by conservation partners, professionals practitioners, local communities and service provider.

It is a comprehensive document that outlines the goals, objectives, strategies and actions required for the effective management and conservation of the Park and its Buffer zone. It encompasses a wide range of aspects, including park protection, habitat management, species conservation, participatory biodiversity conservation, tourism promotion, and sustainable development within the park and Bufferzone.

It is not only a plan for park authority, but also a plan for all the key stakeholders. We believe that the plan will serve as a vital tool for guiding the park's future direction, ensuring the protection of its unique biodiversity, and fostering sustainable development in the surrounding communities.

Finally, I would like to thank all the individuals, organizations and stakeholders who extended their support and cooperation to bring this document to this final stage.

Dr. Sindhu Dhungana  
Director General



Date: 2080/05/29

### Acknowledgement

I would like to acknowledge the effort and dedication of all the individuals who contributed to prepare this management plan. The dedication, expertise, and collaborative efforts have resulted in a comprehensive and well-structured document that will serve as a valuable roadmap for effective management.

First and foremost, I would like to express my gratitude to Director General Dr. Sindhu Dhungana and former Director General Dr. Maheshwor Dhakal for their never-ending guidance, encouragement and support. Similarly, I am thankful to Deputy Director General Mr. Ajaya Karki for his constant technical support throughout the plan preparation period and final review of the plan. I would like to thank Mr. Bishnu Pd. Thapaliya for initial review of the plan. With a special mention, I would like to thank external reviewers Mr. Shyam Bajimaya, Dr. Krishna Pd. Acharya, and Dr. Shanta R. Jnwali for the critical review and feedback to make the plan implementable.

A very special gratitude goes out to all the management section staff including Senior Management Officer Mr. Bishnu Shrestha, Management Officers Mr. Rishi Ram Dhakal and Mr. Shailendra Chaudhary, Ranger Mr. Pushpadeep Shrestha for their invaluable assistance. I would also like to thank task force team members; Planning officer Mr. Hari Bhadra Acharya and all the DNPWC officials and Conservation Partners (NTNC, ZSL Nepal and WWF Nepal) for their valuable comment and cooperation to improve this plan.

I would like to thank all the field staff and respondents for their lively interaction and assistance in the process of preparing this plan. I would also like to thank all the members who participated in BZMC's five-year plan preparation process. Similarly, I would like to thank Mr. Sita Ram Aryal, BZMC Chairperson and all Management Committee members for participating in the meeting and providing valuable suggestions.

I am indebted to Mr. Saurav Shrestha from Natural Resource Conservation Services (NRCS) Pvt. Ltd. and express my sincere thanks for his untiring efforts in supporting us in plan preparation which includes field level interaction, write up, analysis, central level interaction and finalizing the document. I would also like to thank his team members Mrs. Ushma Gyawali for supporting preparing the plan. A thank is also due to Mr. Subash Subedit for preparing maps.

Lastly, I would like to express my gratitude to all those who provided support, whether it be administrative assistance, coordination, or logistical support in preparation of the management plan. In this regard, I would like to thank all my colleagues of PNP, especially Conservation Officers Mr. Surya Khadka, Mr. Amrit Bhatta and Santosh Bhagat, Veterinary doctor Chandra Kala Rana, and Rangers Himal Pathak, Bibek Shrestha, Bishnu Poudel and Ajit Yadav for their collective effort. Lastly, I would like to thank all the front level staff without whom we could not have come to this far.

Dr. Ashok Kumar Ram  
Senior Conservation Officer



नेपाल सरकार  
वन तथा वातावरण मन्त्रालय  
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फोन नं. : ४२२०८५०  
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फ्याक्स नं. : ४२२७६७५



पत्र संख्या : २०८०/८१-व्य  
चलानी नं. : - ४७९

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( ..... शाखा)

व्यवस्थापन  
बबरमहल, काठमाडौं  
२०३७

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विषय: व्यवस्थापन योजना स्वीकृत सम्बन्धमा।

✓ श्री पर्सा राष्ट्रिय निकुञ्ज कार्यालय,  
आधाभार, बारा ।

प्रस्तुत विषयमा तहाँ कार्यालयको प.सं. ०८०/८१ च.नं ८३ मिति २०८०/०४/३२ गतेको पत्र साथ पर्सा राष्ट्रिय निकुञ्ज कार्यालय तथा मध्यवर्ती क्षेत्रको पञ्चवर्षिय व्यवस्थापन योजना (२०८०/०८१-२०८४/८५) स्वीकृतीको लागि पेश हुन आएको टिप्पणी फाईल उपर कारवाही हुँदा व्यवस्थापन योजनाको प्रारम्भिक वातावरणीय परिक्षण (IEE) प्रतिवेदन स्वीकृत भए पश्चात लागु हुने गरि राष्ट्रिय निकुञ्ज तथा वन्यजन्तु संरक्षण नियमावली, २०३० को नियम ३ क. को उपनियम (२) बमोजिम पेश हुन आएको व्यवस्थापन योजना स्वीकृत भएको र स्वीकृत व्यवस्थापन योजनाको वातावरण संरक्षण ऐन, २०७६ तथा वातावरण संरक्षण नियमावली, २०७७ अनुसार प्रारम्भिक वातावरणीय परिक्षण (IEE) अध्ययन प्रक्रिया अगाडि बढाउने भनि मिति २०८०/०५/०६ मा विभागिय निर्णय भएको व्यहोरा निर्णयानुसार अनुरोध छ ।

  
(सुनगाभा कायस्थ)  
कम्प्युटर अधिकृत

## Executive Summary

Parsa National Park (PNP) was established in 1984 as a Wildlife Reserve with the goal of preserving Asian Wild Elephant (*Elephas maximus*) and their remaining habitat of historical Char-Koshe-Jhadi, which spread across Terai from east to west of Nepal. The status of Reserve was changed to National Park on July 3, 2017 (B.S. 3/19/2074) after extension to 627.39 km<sup>2</sup> from 499 km<sup>2</sup>. It is located in central Nepal and includes tropical and subtropical forests of the Churia (Siwalik) and Bhawar physiographic regions of Parsa, Makwanpur, and Bara districts. Parsa, Bara, and Makwanpur districts each have 69.63%, 18.22%, and 11.60% of the total area of Park respectively.

PNP encompasses a small terai Bhawar area with 90% Sal forest, 10% other mixed hardwood and riverine forest, Sissoo and Khair forests, and small grasslands. It has a good variety of floral and fauna. PNP is linked to Chitwan National Park (CNP) in the west and India's Valmiki Tiger Reserve (VTR) in the south-west. The Park is linked to national forests to the east and north. The Park also provides extended habitat for migratory wildlife species, as well as a dispersal site for many mega fauna species, primarily from CNP. Furthermore, PNP meets critical water needs of the people by recharging ground water tables in the lower Tarai region, where a large human population lives.

Prior to the Park's establishment, the forest was subjected to significant anthropogenic pressures such as selective logging, firewood collection, grass cutting, open grazing, uncontrolled fire, collection of non-timber forest products (NTFPs), and poaching. With the declaration of Reserve, these illegal activities were controlled which resulted in restoration of significant forest. The Park contains approximately 1059 hectares of grassland and 67 wetlands, owing to porous soil that cannot hold water. It inhabits 336 species of plants, 37 species of mammals, 490 species of avian fauna and 13 species of reptiles. Despite its limited wetlands and aquatic habitats, this Park is home to three Amphibian species and eight Pisces species.

PNP provide shelter to many wildlife species and contributes in conserving protected species listed in NPWC Act, 2029. Asian Wild elephant (*Elephas maximus*), Gaur (*Bos gaurus*), Royal Bengal tiger (*Panthera tigris*), Striped hyena (*Hyaena hyena*), Asian one-horned rhinoceros (*Rhinoceros unicornis*), Python (*Python molurus*), Giant hornbill (*Buceros bicornis*), Lesser adjutant (*Leptotilos javanicus*), and Sarus crane (*Grus antigone*) are some major protected species of Nepal. Among the plant species, Satal (*Dalbergia latifolia*) is becoming rare due to over exploitation in the past.

As a residential population, there are approximately 60-65 wild elephants. Elephants are mostly found in Rambhori-Bhata, Lauki Daha, Charbhaiya, Mahadev, Ghodemasana, Halkhoriya, Kalidaha, and other Churia inner valleys. After monsoon, elephants frequently leave the park and frequently cross the east-west highway to reach Halkhoriya Daha or further east to the Bagmati

River. Similarly, the Park is home to 41 Bengal tigers (Tiger Survey report 2022), 3 rhinos, and 164 Gaur. Asian one-horned rhinoceros go upto Sarlahi district in the eastern side crossing the Bagmati River. Similarly, Gaur is another mega-fauna found in the foothills of the Churia range at PNP, specifically in the Bhata, Charbhaiya, Mahadev Khola, and Halkria Daha ranges.

This is the second Management Plan of PNP prepared under the leadership of Chief Conservation Officer following the Protected Area Management Plan Preparation Procedure, 2073. The plan envisions to protect rare, endangered and threatened wildlife with special focus to protected species mainly Wild elephant, tigers, Gaur bison, and rhino with appropriate protection strategies. To achieve this vision, the Park will emphasize on to conserve biological diversity of the Park with special focus on protected wildlife species including wild elephant and tiger through restoration, improvement and management of wildlife habitat and contribute towards prosperity of local people. The specific objectives of management are:

- To protect rare, endangered and threatened wildlife with special focus to protected species mainly Wild elephant, tigers, Gaur bison, Four horn antelope, and rhino with appropriate protection strategies.
- To restore, improve and manage habitat and improve connectivity to contain wildlife in the Park and BZ forests thereby maintaining viable population of protected species mainly Wild elephant and tigers;
- To develop tourism infrastructure in order to promote sustainable tourism by involving private entrepreneur so that locals benefit from increased socio-economic opportunities while minimizing and mitigating negative impacts to maintain ecological integrity and cultural heritage;
- To enhance participatory biodiversity conservation by empowering BZ communities while decreasing the risks of climate vulnerabilities and improving livelihood of local people;
- To maintain human wildlife amity by addressing issues related to HWC; and
- To strengthen institutional capacity of Park and BZ through research, capacity building, coordination and collaboration.

The management plan aims to achieve the above-mentioned objectives through specific interventions in Park protection, Habitat management, Species conservation, Fire control, Encroachment control, Research-monitoring and capacity building, Climate change adaptation and BZ management. The total budget of the plan is NRs. 1,196,358,000 (One billion one hundred ninety-six million three hundred fifty-eight thousand only). The plan gives much weightage to Park protection followed by habitat management and BZ which are around 18%, 11 % and 11% respectively. The next priority is given to Species conservation, Tourism development, Research, monitoring and capacity building and Wildlife health management, and Human wildlife conflict which are about 8 %, 7%, 5%, 4% and 4% respectively. It is expected that if all the activities of the the plan are implemented, it will create the employment of 218157 (person days) over the period of five years.

## सारांश

पर्सा राष्ट्रिय निकुञ्ज रैथाने जंगली हात्ती तथा तिनिहरुको बासस्थानको संरक्षण एवं व्यवस्थापन गर्ने उद्देश्यले ४९९ वर्ग कि.मि क्षेत्रमा फैलिएको पर्सा वन्यजन्तु आरक्षको रुपमा बि.स. २०४१ सालमा स्थापना भएको हो । यस निकुञ्जले दक्षिण भागमा अवस्थित ठूलो जनसंख्या भएको तराईको लागि भूमिगत जलस्रोत उपलब्ध गराउन सहयोग पुर्याउदै आईरहेको छ । यस संरक्षित क्षेत्रले नेपालको पूर्व देखि पश्चिममा तराईसम्म फैलिएको ऐतिहासिक चारकोशे भाडीको केही अंश प्रतिनिधित्व गर्दछ । पर्सा राष्ट्रिय निकुञ्ज पश्चिममा चितवन राष्ट्रिय निकुञ्ज संग जोडिएको छ र दक्षिण पश्चिमी भागमा भारतको वाल्मिकि टाइगर रिजर्वसंग जोडिएको छ । पूर्वी र उत्तर भागमा निकुञ्ज राष्ट्रिय वनसंग जोडिएको छ । पर्सा राष्ट्रिय निकुञ्ज नेपालको मध्य भागमा अवस्थित तराई, भावर र चूरे क्षेत्रमा पाईने विविध पारिस्थिकीय प्रणालीहरुको प्रतिनिधित्व गर्दै बारा, मकवानपुर र पर्सा जिल्लाका केही भागहरुमा फैलिएको छ । निकुञ्जले पर्सा, बारा र मकवानपुर जिल्लाको क्रमशः ७०% १८% र १२% क्षेत्रफल ओगटेकोछ । निकुञ्जको पूर्वतिर हलखोरिया दह र आसपासको वनक्षेत्र वन्यजन्तुको लागि उपयुक्त वासस्थान भएकोले १२८.३९ वर्ग कि.मि थप गरी ४९९ वर्ग कि.मि बाट ६२७.३९ वर्ग कि.मि क्षेत्रफल पुर्याई २०७४ साल अघाढ ३ गते पर्सा वन्यजन्तु आरक्षबाट राष्ट्रिय निकुञ्जमा परिणत गरिएको थियो ।

पर्सा राष्ट्रिय निकुञ्जको ९० प्रतिशत भूमि सालको जङ्गलले ढाकेको छ भने १० प्रतिशत मिश्रित काठे पतझड वन र नदी तटीय वन लगायत अन्य सिसौ खयरको वन रहेको पाईन्छ । यस निकुञ्जमा विभिन्न प्रजातिको वन्यजन्तु तथा रुख विरुवाहरु को विविधता पाइन्छ र साथै चितवन राष्ट्रिय निकुञ्जका फिरन्ते गैडा जस्ता ठूला आगन्तूक वन्यजन्तुहरुलाई पनि आश्रयस्थल प्रदान गरेको छ ।

संरक्षित क्षेत्रको स्थापना गर्नु अघि वन जङ्गलमा मानिसहरुको अत्यधिक दबाव थियो । वनमा राम्रा रुख छनौट गरेर कटान गर्ने, घाँस काट्ने तथा दाउरा संकलन गर्ने, खुल्ला चरिचरन, गैह्रकाष्ठ वन पैदावार संकलन जस्ता गैरकानूनी गतिविधिहरुबाट वनको हैसियत दिनानुदिन बिग्रदो अवस्थामा थियो । आरक्षको घोषणासंगै र संरक्षणको कार्यबाट यस्ता कार्यको साथै चोरी शिकारी पनि नियन्त्रित भई वनको पुनर्स्थापना सहयोग पुग्न गई वन्यजन्तुको वासस्थान पनि सुधार हुँदै गएको छ । यस निकुञ्जमा लगभग १०५९ हेक्टर घाँसे मैदान र ६७ वटा पानी पोखरी रहेका छन् । यस भावर क्षेत्रको माटोमा पानी शोषण गर्ने क्षमता कम भएको हुँदा जमिन सुख्खा रहने गर्दछ । यस निकुञ्जमा ३३६ प्रजातिका विरुवा, ३७ प्रजातिका स्तनधारी, ४९० प्रजातिका चरा र १३ प्रजातिका सरिसृप पाईन्छन् । सिमित सिमसार र जलीय वासस्थान भएता पनि यस निकुञ्जमा ३ प्रजातिका उभयचर र ८ प्रजातिका माछा पाईन्छन् ।

पर्सा राष्ट्रिय निकुञ्जले राष्ट्रिय निकुञ्ज तथा वन्यजन्तु संरक्षण ऐन, २०२९ द्वारा सूचीबद्ध गरिएको संरक्षित प्रजातिहरुको संरक्षणमा उचित योगदान पुर्याएको छ । संरक्षित वन्यजन्तुहरुमा जङ्गली हात्ती,

गौरीगाई, पाटे बाघ, गैंडा, अजिंगर, सालक, राजधनेश, भूँडीफोर र सारस केन पर्दछन् । यस निकुञ्जमा धेरै मात्रामा निकासीको कारणले दूर्लभ हुन पुगेको सतिसालको संरक्षणमा पनि जोड दिएको छ ।

जङ्गली हात्तीहरु भुण्डमा रहने गर्दछन् र धेरै जस्तो मनसुनी वर्षात पछि निकुञ्ज बाट बाहिर निस्कने गर्दछन् र प्राय पूर्व पश्चिम राजमार्ग पार गरेर हलखोरिया दह वा बाग्मती नदी सम्म पुग्छन् । विभिन्न समयमा वन्यजन्तुको गणना गर्दा यहाँ ४१ वटा पाटे बाघ, ३ वटा गैंडा र १६४ वटा गौरीगाईहरु पाईएकोछ । ठुला जनावर मध्ये गैंडाहरु कहिले काहीँ बाग्मती नदी पार गरेर सर्लाही जिल्ला सम्म पुगेको अवस्था रहेको छ । त्यसै गरी गौरीगाई अर्को ठुला जनावर मध्ये एक हो जुन मिश्रित काष्ठजन्य वनपैदावार र चुरीया क्षेत्रको तल्लो तटीय क्षेत्र विशेष गरी भाटा, चारभैया र महादेव खोला तिर पाईने गर्दछ ।

पर्सो राष्ट्रिय निकुञ्जको यो पहिलो व्यवस्थापन योजना हो । यो पञ्च बर्षिय योजना संरक्षित क्षेत्रको व्यवस्थापन योजना तयारी कार्यवीधि २०७३ अर्न्तगत प्रमुख संरक्षण अधिकृतको नेतृत्वमा बनाईएको हो । व्यवस्थापन योजनाको उद्देश्य निम्न रहेका छन् ।

- जङ्गली हात्ती, पाटे बाँघ, गैंडा र अन्य वन्यजन्तुको वासस्थान पुर्नस्थापना, सुधार र व्यवस्थापन गर्ने,
- पर्यटन व्यवसायीहरुको सहभागीतामा पर्यटन पुर्वाधार विकास गरी वातावरणीय प्रभाव न्यूनीकरण गर्दै सामाजिक आर्थिक अवसर सदुपयोग गर्ने,
- स्थानीय समुदायको संस्थागत सुधृढिकरण गर्दै संरक्षण, जिविकोपार्जन सुधार गर्दै, संरक्षण सचेतना बढाउदै जैविक विविधताको संरक्षण सहभागितात्मक तवरमा गर्ने,
- अध्ययन, अनुसंधान र तालिमजस्ता कार्यक्रम गर्दै निकुञ्ज र स्थानीय मध्यवर्ती क्षेत्रको कर्मचारी र पदाधिकारीहरुको क्षमता अभिवृद्धि गर्ने,

यो व्यवस्थापन योजना दुई भागमा बाँडिएको छ जसमा पहिलो भाग विद्यमान परिस्थिति र दोश्रो भागमा प्रस्तावित व्यवस्थापन रहेको छ । भाग एकमा राष्ट्रिय निकुञ्ज सम्बन्धि परिचय राखिएको छ जुन अध्याय १ देखि ३ सम्म रहेको छ । भाग दुई अर्न्तगत अध्याय ४ देखि ११ सम्म राखिएको छ जसमा दूरदृष्टि, लक्ष्य, उद्देश्य, चुनौति, रणनीति, अनुसंधान, अनुगमन, क्षमता अभिवृद्धि, प्रजाति संरक्षण, पर्यटन, सामुदायिक विकास, बजेट र तर्कपूर्ण सोचको खाका समावेश गरिएको छ ।

यस योजनामा प्रस्ताव गरिएका विभिन्न कार्यक्रमहरु मध्ये निकुञ्जको सुरक्षा र वासस्थान व्यवस्थापनमा जोड दिईएको छ । वासस्थान व्यवस्थापनमा विशेष गरी घाँसे मैदान र सिमसार व्यवस्थापन पर्दछन् । प्रजाति संरक्षण मध्ये जङ्गली हात्तीको संरक्षण र व्यवस्थापनलाई नै बढी महत्व

दिईएको छ । साथै, यस योजनामा पर्या-पर्यटन, अध्ययन अनुसंधान, संस्थागत विकास र सुदृढीकरण, सामुदायिक विकास, सीप विकास तथा आय-आर्जन र संरक्षण शिक्षा समावेस गरिएको छ । व्यवस्थापन योजनाले परिलक्षित गरेका कार्यहरु कार्यान्वयन गर्न १,१९६,३५८,००० (एक अरब उन्नाईस करोड त्रीसठ्ठी लाख अन्ठाउन्न हजार मात्र) रुपैया लाग्ने प्रस्ताव गरेको छ । प्रस्तावित उक्त कुल बजेटको १८% रकम निकुञ्जको सुरक्षा मा छुट्याईएको छ भने वासस्थान ब्यवस्थापनका र मध्यवर्तीको लागि ११% र ११% रकम प्रस्ताव गरिएको छ । त्यस्तै प्रजाति संरक्षण, पर्यटन प्रवर्द्धन, अध्ययन, अनुगमन् र तालिम, वन्यजन्तु स्वास्थ्य र मानव वन्यजन्तु द्वन्द न्यूणीकरणको लागि पनि ८%, ७ %, ५%, ४% र ४% छुट्याएर पर्यटनको गन्तव्य बनाउने लक्ष्य राखेको छ । यस ब्यवस्थापन योजनामा प्रस्ताव गरिएका सम्पूर्ण कार्यक्रमहरु कार्यान्वयन हुन सकेमा योजना अवधिभर स्थानीयस्तरमा २१८१५७ श्रमदिन रोजगारी सृजना हुने देखिन्छ ।

## Acronyms

|       |                                                                                 |
|-------|---------------------------------------------------------------------------------|
| ACO   | Assistant Conservation Officer                                                  |
| APU   | Anti-Poaching Unit                                                              |
| BPP   | Biodiversity Profile Project                                                    |
| BZ    | Buffer Zone                                                                     |
| BZCF  | BZ Community Forest                                                             |
| BZMC  | Buffer Zone Management Committee                                                |
| BZUC  | Buffer Zone User Committee                                                      |
| BZUG  | Buffer Zone User Group                                                          |
| CBAPU | Community Based Anti-Poaching Unit                                              |
| CCO   | Chief Conservation Officer                                                      |
| CCTV  | Close Circuit Television                                                        |
| CFUG  | Community Forest User Group                                                     |
| CIB   | Central Investigation Bureau                                                    |
| CITES | Convention on International Trade in Endangered Species of Wild Fauna and Flora |
| CNP   | Chitwan National Park                                                           |
| DNPWC | Department of National Parks and Wildlife Conservation                          |
| GESI  | Gender Inequality and Social Inclusion                                          |
| GIS   | Geographical Information System                                                 |
| GoN   | Government of Nepal                                                             |
| HWC   | Human Wildlife Conflict                                                         |
| IAS   | Invasive Alien Species                                                          |
| IEC   | Information Education and Communication                                         |
| IUCN  | International Union for Conservation of Nature and Natural Resources            |
| MOFE  | Ministry of Forests and Environment                                             |
| NA    | Nepal Army                                                                      |
| NGO   | Non-Governmental Organization                                                   |
| NPWC  | National Parks and Wildlife Conservation                                        |
| NTFP  | Non-Timber Forest Product                                                       |
| OP    | Operational Plan                                                                |
| PA    | Protected Area                                                                  |
| PNP   | Parsa National Park                                                             |
| PWR   | Parsa Wildlife Reserve                                                          |
| RCC   | Reinforced, Cement Concrete                                                     |
| RRT   | Rapid Response Team                                                             |
| TAL   | Terai Arc Landscape                                                             |
| TCU   | Tiger Conservation Unit                                                         |
| ToT   | Training of Trainer                                                             |
| VIC   | Visitor Information Centre                                                      |
| VTR   | Valmiki Tiger Reserve                                                           |
| WCCB  | Wildlife Crime Control Bureau                                                   |

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## **Process of management plan preparation**

Parsa National Park and its Bufferzone management plan is prepared following Protected Area Management Plan Preparation Procedure, 2073. An extensive participatory approach was used to prepare this second version of the management plan (2080/81-2084/85). Nepal Biodiversity Strategy and Action Plan (2014-2020) served as the guiding document in conceptualizing the plan's Vision and Goals, devising a strategy, and planning activities. In the process, following steps were followed; i) review of published literatures, documents, annual progress reports, project reports; ii). consultation meeting with Park staffs, Nepal Army deputed in Parsa National Park; iii) discussed with tourism operators; iv) shared the draft plan including logical frame with Park staffs; v) carried out planning meeting and discussion with all Buffer zone User Committees; vi) organized sharing of draft plan with Buffer zone Management Committee members including relevant stakeholders for their comments and input; vii) conducted sharing of draft plan with the experts of Department of National Parks and Wildlife Conservation (DNPWC) inviting experts from conservation partners at DNPWC meeting hall to solicit comments, feedbacks and input; viii) prepared refine draft accommodating all the comments and feedbacks; ix) forwarded the refined draft plan to the external reviewers to obtain comments and suggestion; x) incorporated comments and feedbacks from external reviewers and submitted at DNPWC for final comments and suggestion. xi) finalization of the plan and submitted for approval.

## **Part A - The Existing Situation**

# Chapter 1

## 1. Introduction of the Protected Area

### 1.1 Name, Location, Constitution and Extent

#### 1.1.1 Name: Parsa National Park

#### 1.1.2 Location

The Parsa National Park (PNP) is located at central lowland in Madhesh Province and Bagmati Province of Nepal (Figure 1). It adjoins Chitwan National Park (CNP) on its western side. Geographically, PNP is located within north latitude of 27° 15' to 27° 33' and east longitude of 84° 41' to 84° 58'.

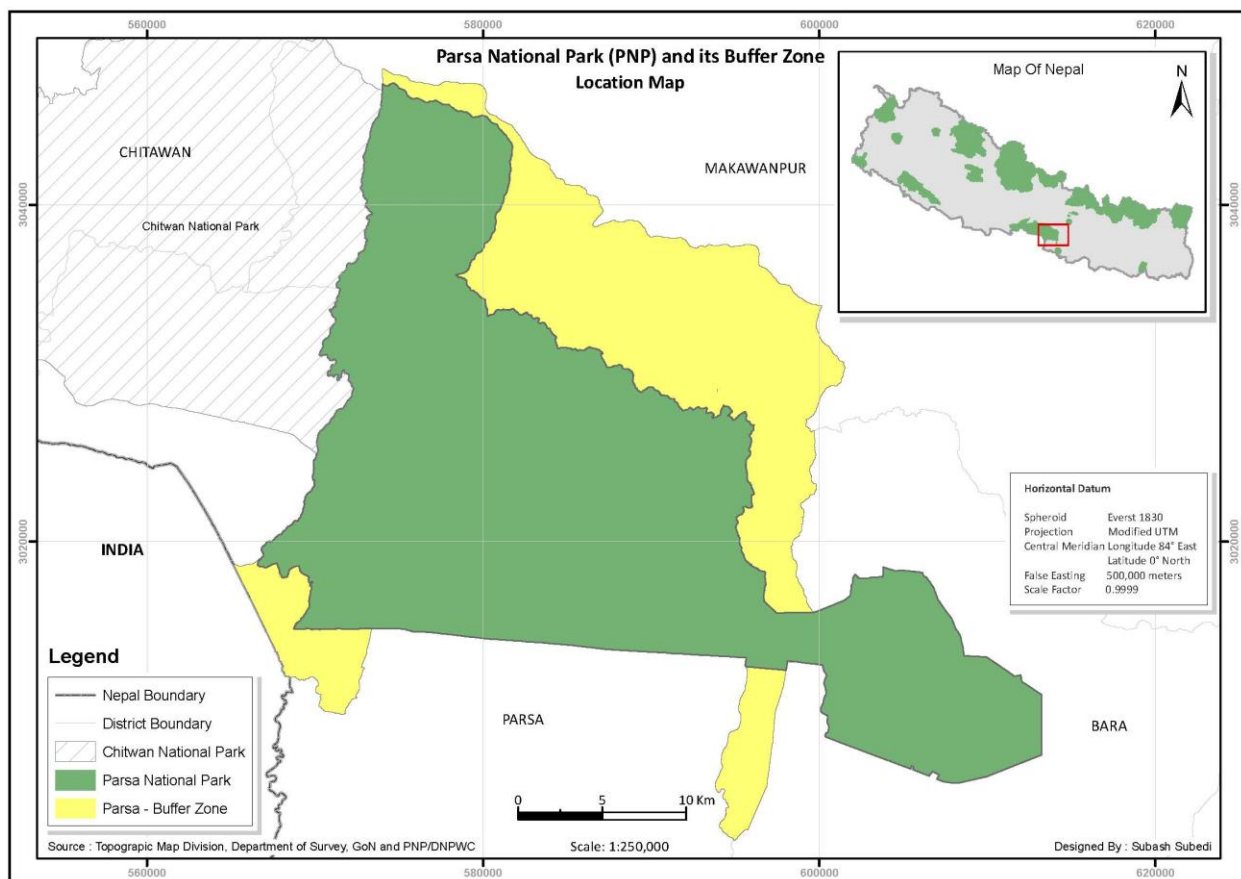


Figure 1: Location of PNP and its Buffer Zone

#### 1.1.3 Constitution and Extent

PNP was established in 1984 as Parsa Wildlife Reserve with an area of 499 km<sup>2</sup>. An area of 128.39 km<sup>2</sup> of Bara, Parsa and Makawanpur districts along with Halkhoriya Lake was added to reserve in 2072 through the notification of Nepal Gazette of Bhadra 07, 2072 (August 24, 2015). Along with this extended area totaling 627.39 Km<sup>2</sup>, the status of Wildlife Reserve was changed to National Park on Asadh 19, 2074 (July 03, 2017). Now, Halkhoriya Lake is one of the major wildlife habitats in the park. About 65 km of East-West highway passes through Park and Buffer

Zone (BZ). Of the total Park area, 70%, 18% and 12% falls under Parsa, Bara and Makwanpur district respectively (*Table 1*). Similarly, the area of BZ is 285.3 km<sup>2</sup> that falls in Parsa 12%, Bara 21% and Makwanpur 67% respectively.

Table 1: PNP at a glance

|                                                |                                                                                                                                                        |
|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Location                                       | South Central Lowland of Madhesh Province and Bagmati Province of Nepal                                                                                |
| Year of Establishment (PWR)                    | 2041 BS (1984) with the area of 499 km <sup>2</sup>                                                                                                    |
| Park Headquarter                               | Aadhavar of Bara on East-West highway                                                                                                                  |
| Change of Status from Reserve to National Park | Ashad 19, 2074 (July 03, 2017)                                                                                                                         |
| Park Area                                      | Initially 499 km <sup>2</sup> in 2041 BS (1984) increased to 627.39 km <sup>2</sup> after adding Halkhoriya Lake in the eastern side in 2074 BS (2017) |
| Elevation                                      |                                                                                                                                                        |
| IUCN Category                                  | II                                                                                                                                                     |
| Districts included in the Park                 | Parsa (70%), Bara (18%), Makwanpur (12%)                                                                                                               |
| Declaration year of BZ                         | 2062 BS (2005) with the area of 285.3 km <sup>2</sup>                                                                                                  |
| Bio-Climatic Zone                              | Tropical to Sub-Tropical Climate                                                                                                                       |
| Major Rivers                                   | Rapti, Dudhaura, Bhedaha, Pasaha, Bhata khola                                                                                                          |
| Major Lake                                     | Halkhoriya, Kali, Kamini, Bhata, Lauki, Deuki                                                                                                          |
| Biodiversity                                   | Mammals-37 species; Birds-490 species; Reptiles-13 species; Butterflies-31 species; Pisces-8 species; Plants-336 species.                              |
| Protected species                              | Wild elephant, Tiger, Gaur, Rhinoceros, Striped hyena, Pangolin, Four horn antelope, Python, Giant hornbill, Lesser adjutant, Sarus crane              |
| Gaur Count 2007                                | 37 individuals                                                                                                                                         |
| Tiger count using camera trap 2009             | 4 individuals                                                                                                                                          |
| Tiger count using camera trap 2013             | 7 individuals                                                                                                                                          |
| Gaur Count 2013                                | 21                                                                                                                                                     |
| Rhino count 2015                               | 3                                                                                                                                                      |
| Gaur Count 2016                                | 105                                                                                                                                                    |
| Tiger count using camera trap 2018             | 18                                                                                                                                                     |
| Gaur Count 2020                                | 164                                                                                                                                                    |
| Rhino count 2021                               | 3                                                                                                                                                      |
| Tiger count using camera trap 2022             | 41                                                                                                                                                     |
| Recent mega fauna wildlife population in PNP   | Wild elephant – 60 to 65; Tigers-41; Gaur-164; Rhinoceros-3                                                                                            |

## 1.2 Access

The Park headquarters is located at Aadhavar of Bara on East-West highway of Madhesh Province (Figure 2). It can be reached by plane as well as by road, which is around 200 kilometers from Kathmandu. Getting to Park headquarters requires a 15-minute drive from Simra

after a 20-minute flight from Kathmandu. Similarly, it takes 4-5 hours to travel by road from Kathmandu to Aadhavar or vice versa..

Hetauda and Birgunj, Nepal's two major industrial and business centers, are about 25 kilometers north and 23 kilometers south of Aadhavar respectively. From either town, Aadhavar is accessible by bus in less than an hour. Birgunj is also the entry point for Nepal from India, which may help to encourage tourism in the Park.

PNP can also be approached from Mahadev, Charbhaiya, Gaduwaline, Nirmalbasti, Amlekhgunj, Ramauli Pratappur, Lamitar, Pasaha, and Ratanpuri posts, and also from Aadhavar. Northern posts such as Manahari and Padampokhari are located in BZ and are linked by road networks. Except during monsoon floods, the inner part of the Park is accessible by four-wheel motor drive, primarily in the southern section, via a network of fireline or gravel road (*Figure 2*).

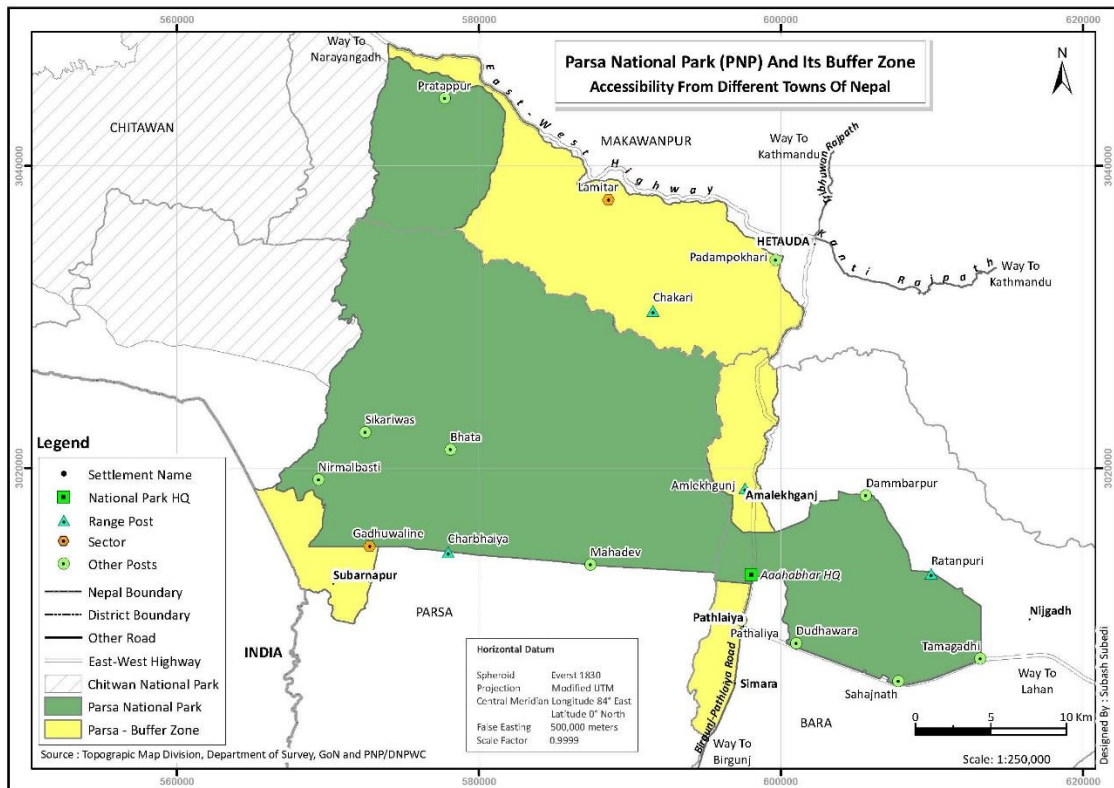


Figure 2: Accessibility of PNP from Different Towns of Nepal

### 1.3 Statement of Significance

PNP covers a part of Terai Bhawar area having 90% Sal forest and 10% other mixed hardwood and riverine forest of Sissoo and Khair forests with small area of grassland. It has a diverse floral and faunal species.

It plays a vital role to accomplish goals and objectives of Protected Area (PA) management regimes of Nepal. The significant characteristics of the Park are as follows:

- Represents a sample of historical Char-Koshe-Jhadi (6 miles width of forest) remaining in the Terai,
- Home to a large resident population of wild Asian elephants,
- Provides an extended habitat for migratory wildlife species as well dispersal site for spill over population of Tigers and Rhinos from CNP,
- Provides an opportunity to link PAs of Nepal from north to south and east to west as it is connected with CNP in the west, Valmiki Tiger Reserve (VTR) in India in west-southern part. In the east and north, PNP is connected to national forests of Nepal,
- Park covers 62.5% of Churia and it conserve water sources for the large human population living in the southern side of Park and at the same time it contribute to minimize soil erosion in the Churia as well as reducing risk of sedimentation in downstream.

## **Chapter II**

### **2. Background Information and Attributes**

#### **2.1 Boundaries**

##### **2.1.1 Legal**

PNP was gazetted as a PWR on Jestha 08 2041 (May 21, 1984) and the status of the Reserve was been changed to the National Park on Ashad 19, 2074 (July 03, 2017), adding 128.39 km<sup>2</sup> in existing reserve area of 499 km<sup>2</sup>, encompassing potential wildlife habitats and to allow tourism to flourish and contribute to economic development of local people. Similarly, BZ was established on Ashad 13, 2062 (June 27, 2005) to improve conservation benefits for the BZ of PA's surrounding communities. The Park and BZ areas have been properly notified and delineated on the ground. The boundary of the Park and BZ as per the gazette notification of the Government of Nepal (GoN) can be seen in the Annex V.

##### **2.1.2 Legislations**

###### **2.1.2.1 National Parks and Wildlife Conservation Act 2029 (1973 AD)**

The clause (3)-(1)(Ka) of the fifth amendment of National Parks and Wildlife Conservation (NPWC) Act, 2029 has made it mandatory that Parks, Reserves and Conservation Areas must be conserved and managed by the management plan approved by the Department of National Parks and Wildlife Conservation (DNPWC).

###### **2.1.2.2 Control of International Trade in Endangered Species of Wild Fauna and Flora Act 2074 (2017AD)**

Control of International Trade in Endangered Species of Wild Fauna and Flora Act, 2074, generally known as CITES Act, has recently been enacted. This Act has authorized Chief Conservation Officer or officer assigned by him/her of the protected area to work as Investigation Officer in illegal wildlife trade related offences and to file case in District Court as per the Clause (23).

###### **2.1.2.3 Buffer Zone Management Regulation, 2052 (1996)**

The Buffer Zone Management Regulation, 2052 (1996) have clearly spelled out requirement of management plan and user committees' operation plans. The management plan will be prepared by Chief Conservation Officer (CCO) with the support of Assistant Conservation Officers (ACOs) and experts, if required, and submit it to the DG of DNPWC for the approval. Similarly, under this rule, the CCO can form Buffer Zone User Group (BZUG), Buffer Zone User Committee (BZUC) and Buffer Zone Management Committee (BZMC) which will be responsible to carry out participatory biodiversity conservation in the BZ with the support of Park authority.

### **2.1.3 Ecological**

PNP was established in 1984 with the aim of preserving Asian Wild elephant habitat. The strategic location of the Park provides opportunities to link the PAs of Nepal from north to south and east to west. PNP is connected with CNP in the west, which is further extended westward, and linked to Mahabharat forests in the north through Barandabhar forest, and to Indian PAs in the south through VTR. In the east, PNP is connected to the national forests extending up to Bagmati River in Rautahat district. The Park also possesses potentiality to link north through a stretch of forest near Lothar in Makwanpur. Together with VTR of India, CNP and PNP of Nepal, a total of coherent 2460 km<sup>2</sup> represents the Tiger Conservation Unit (TCU).

## **2.2 Geology and Soil**

The Churia-hills, formed around 40 million years ago by Himalayan sediments, represent a sub-himalayan mountain system that runs east-west almost parallel to the Mahabharat range. Conglomerates are the rocks that were most likely deposited during the Miocene period. The Churia is full of gullies due to its loose and erodible geomorphological characteristics, and its southern part is extremely dry and well-drained, making it unsuitable for cultivation. As a result, there is little human activity. The northern part, however, is rich in biodiversity due to terai and hill features (Sharma, 1977).

Churia can be divided into upper, middle, and lower Siwalik based on altitude and geology, though the latter two do not have clear-cut lithological differences in all places (Gurung and Khanal, 1988). The upper Siwalik is made up of unconsolidated clays, sandstones, limestone, quartzite, phyllite, shale, and slate conglomerates. Because of poor cementation, the middle Siwalik is more fragile, with soft stones interspersed with bands of hard calcareous sandstones and clay. The lower Siwalik is made up of sandstones. It is composed of fine to medium-grained gray (compact and hard) sandstones interbedded with nodular shale, conglomerates, pebble and boulder beds, the siltstone and some clay (Sharma, 1977).

The entire Churia range is covered with colluvial and alluvial deposits making difficult to distinguish the Bhawar alluvial from poorly consolidated Siwalik formation. The Bhawar zone is defined by the southern and northern foothills of Churia, which extend up to 10 kilometers to the south. The Bhawar zone, while having gentle slopes like the Terai, is extremely dry due to its boulders and gravelly nature.

Terai is represented by a flat area in the Park's southernmost region. It is made up of fine alluvium depositions of quaternary materials. Though the Terai is considered moist in nature, PNP is typically dry, especially to the east. Moist Terai, on the other hand, is found in the western portions of the Park around Gaduwaline and Nirmalbasti posts, and to some extent in Rambhori-Bhata areas. The Ramauli-Pratapapur area, located on the Park's north side, represents

inner-Terai and contains features of both Terai and hills. This region is fertile and rich in biodiversity (Sharma, 1977).

Brown shallow soil, brown, black soil, red soil, black soil, and brown soil are the most common soil types that are found in and around PNP. The brown shallow soil has a loamy texture and is made up of dystochrepts, ustorthents, and ustochrepts by nature. In the forest and around the Churia hills, brown, black, and red soils predominate. Black soils are common in Sal (*Shorea robusta*) forests (haplustolls). In and around the area, there is also brown soil (systochrepts and ustochrepts) and well-sorted dry shallow soil (Sharma, 1977). Aadhavar's soils consist of brown shallow soil, black and red soil, black soil, brown soil, wet well drained soil, poorly drained brown soil, and well sorted dry shallow soil (Hawking 1986, LRMP 1978).

### **2.3 Topography and Drainage**

The Park's elevation ranges from 100 to 950 meters above sea level. From north to south, it can be divided into three topographic regions: Churia (Siwalik), Bhawar, and Terai. Inner-Terai also comprises towards north side of Churia range. The Churia and Bhawar zones (above 250 msl) cover approximately two-thirds (62.5%) of the Park area, while Terai and inner-Terai cover approximately 37.38%.

There are many seasonal streams that pass through the Park in Churia watershed systems, but there are very few perennial rivers. During the monsoon, the flow of water is noticeable (June to September). During the winter, most streams dry up. The important streams that flow northward from Churia and are tributaries of the Rapti River are Hasta Khola, Bhalu Khola, and Bagau Khola. The rivers Bhedaha Khola, Bhalu Khola, Mahadev Khola, Jamuni Khola, Bhata Khola, Orai Khola, and Doharam Khola flow south. Though water is scarce in the basins of Bhedaha Khola and Mahadev Khola, Bhata Khola is the only perennial stream among south-flowing streams (Figure 3). Due to the extreme porosity of the Bhawar, all streams disappear and resurface in the southern side, outside the Park boundary.

During monsoon rains, numerous gullies form in the Churia hills, and a large volume of boulders and sands are transported downstream, resulting in rising riverbeds that change the course every year, making the entire lowland area vulnerable to flooding. Flooding has caused significant damage in recent years, not only to the forest and wildlife within the Park, but also to the lives and property of the surrounding communities in BZ. In the Park and surrounding areas, problems such as forest destruction, tree uprooting, debris deposition, cutting of riverbanks and croplands, and sand and gravel deposition in croplands are all very common. Many river/stream widths are increasing at the expense of forest area.

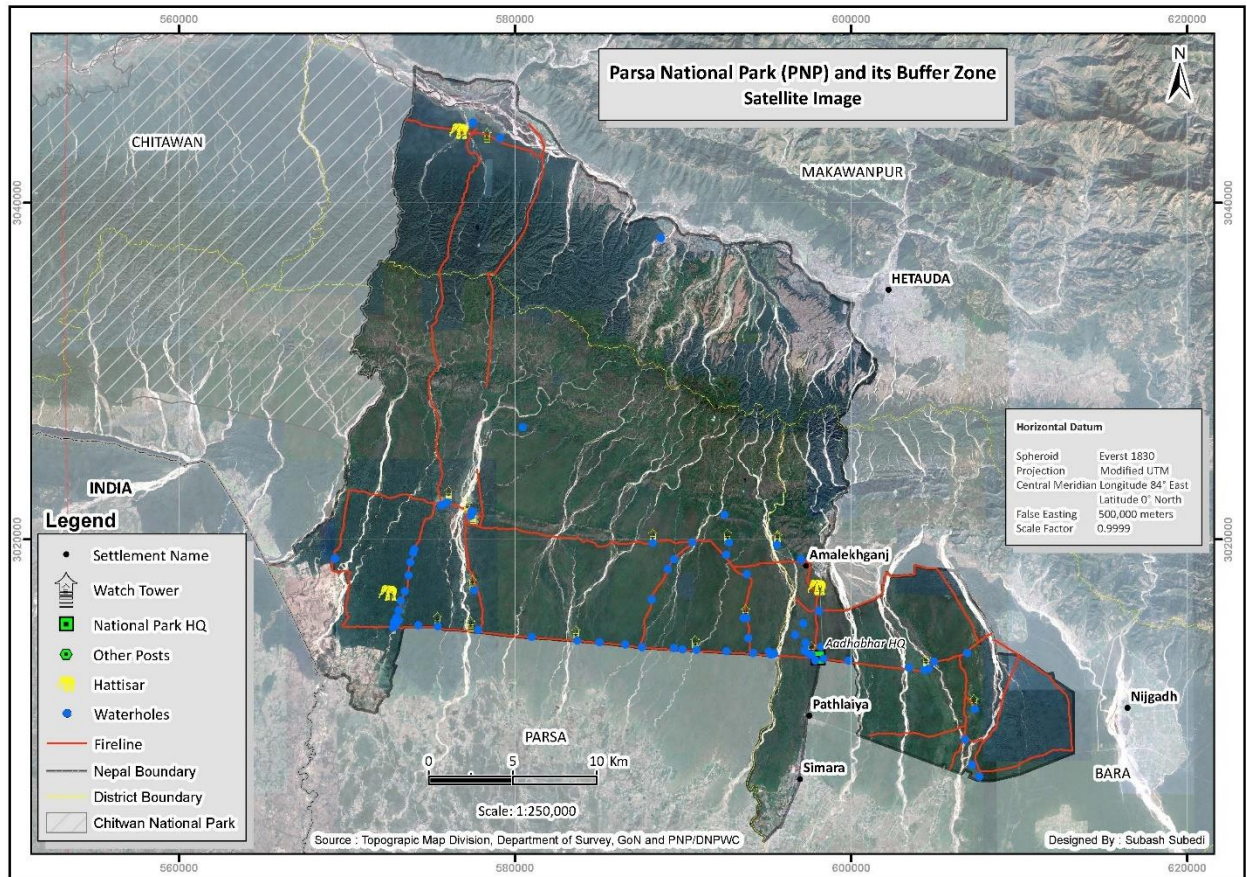


Figure 3: Satellite image showing topography and drainage

## 2.4 Climate

PNP has a humid subtropical climate with four distinct seasons: summer, rainy (monsoon), winter, and spring. Summer (May to July) is extremely hot, with temperatures reaching upto 39° C and a lack of water in the area. Monsoon clouds and rains dominate the rainy season (July to September), causing little temperature drop. Winter lasts from November to January, with cold evenings and mornings reaching 7° C under clear skies. Similarly, spring (February to April) is a pleasant season, with chilly nights and pleasant day temperatures, as well as clearer skies but drier air and land. May is the hottest month when the mean maximum temperature reaches to 39° C while coolest month is January with mean minimum temperature 7° C (Figure 4).

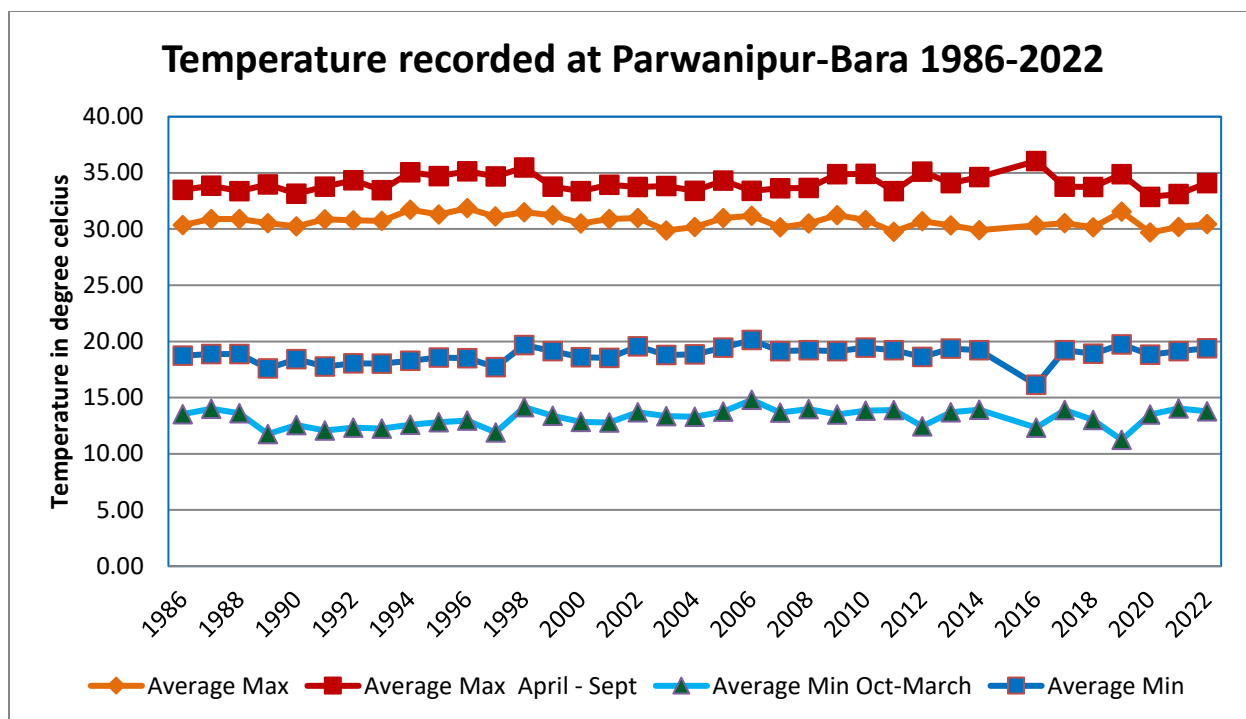


Figure 4: Average Annual Temperature Recorded at Parwanipur (DHM 2022)

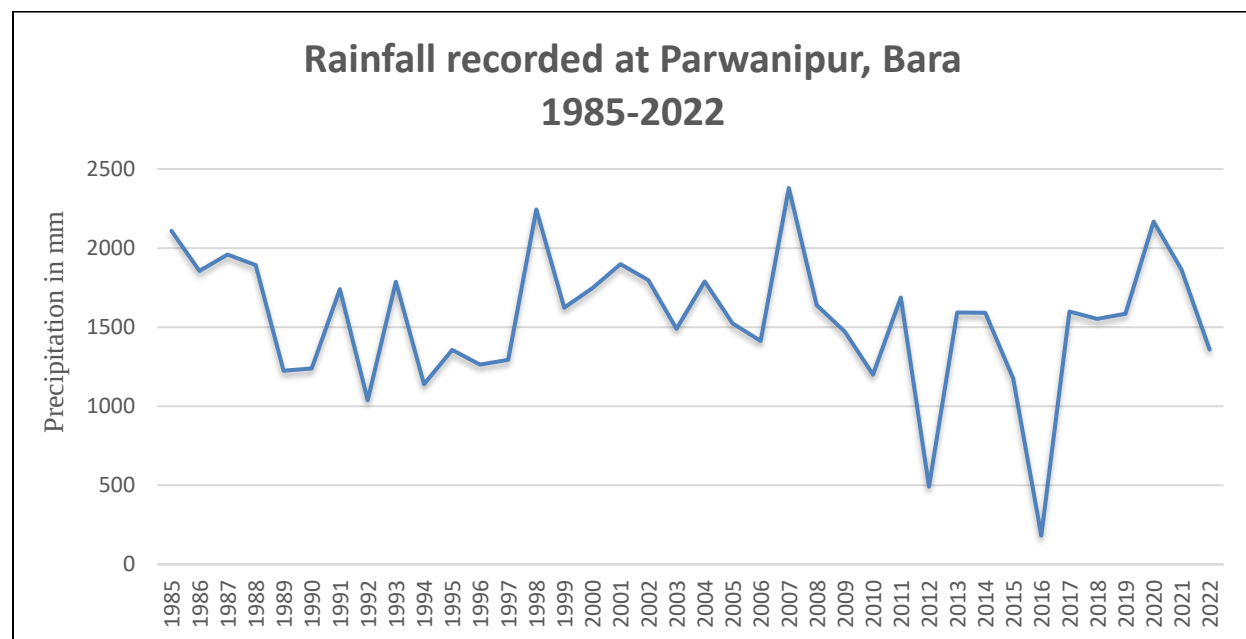


Figure 5: Annual Precipitation at Parwanipur (DHM 2022)

The highest precipitation occurred in 2007 with 2380 mm while only 493 mm rainfall occurred in 2012 (Figure 6). The precipitation occurs mainly from June to September and receives 83% of the total precipitation.

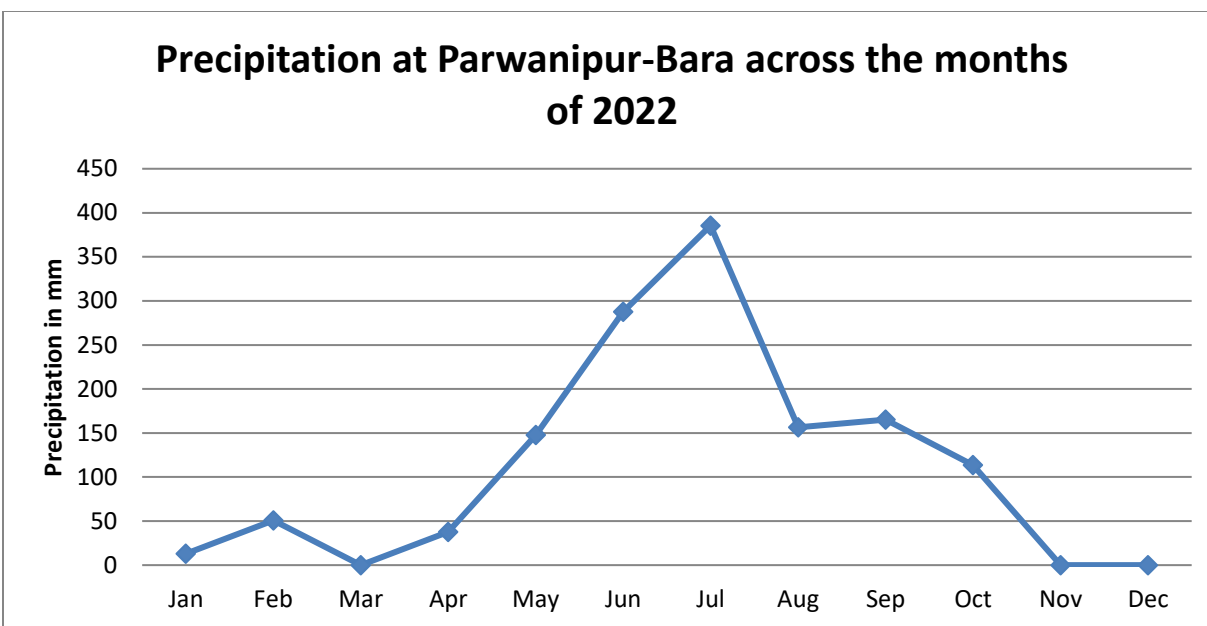


Figure 6: Precipitation in the year 2022 (DHM 2022)

## 2.5 Biodiversity Status

### 2.5.1 Floral diversity

The vegetation in the Park mainly consists sub-tropical desiduous forests (about 90%) dominated by Sal (*Shorea robusta*) and other associated species. However, a variation in the vegetation composition according to slopes, altitudes and other edaphic and micro-climatic factors is quite distinct. Based on the studies, PNP vegetation can be divided into six types (Chaudhary 1998 and BPP, 1996).

**Mixed Deciduous Riverine Forest:** This type of forest is distributed relatively in a stable soil of Terai and Bhawar, at an altitude of about 200m asl or more from the riverbanks. Dominated by deciduous tree species like Sissoo (*Dalbergia sissoo*), Khair (*Acacia catechu*), Simal (*Bombax ceiba*), Phorsa (*Grewia disperma*), Khirro (*Holarrhena pubescens*), the associated bush species include Bayer (*Zyzyphus mauritiana*), Boksi Kanda (*Caesalpinia cucullata*) and Asare (*Murraya koenigi*).

**Mix Deciduous Hardwood Forest:** Lying in low areas of the Park with more stable soil, the mixed deciduous hardwood forest mainly consists of tree species like Sal (*Shorea robusta*), Haldu (*Adina cardifolia*) and Saj (*Terminalia alata*) in the uppermost canopy. The secondary canopy is formed by Tantari (*Dillenia pentagyna*), Botdhayero (*Lagerstroemia parviflora*), Sindhure (*Mallotus phillippensis*) and Kurilo (*Asparagus racemosus*), Ram datiwan (*Smilax ovalifolia*) and saplings of Phoenix spp. constitute the dense ground vegetation.

Sal (*Shorea robusta*) Forest: In the areas with dry and stable soil in lower Churia foothills and plains, pure Sal stands are common. According to the altitude and moisture conditions, the associates of Sal in the upper canopy of this forest type vary from Saj (*T. tomentosa*), Harro (*T. chebula*), Barro (*T. belerica*), Banjhi (*Anogeissus latifolia*), to Haldu (*Adina cordifolia*). The associated species of the middle canopy are Tantari (*Dillenia pentagyna*), Khirro (*Holarrhena pubescens*), Koiralo (*Bauhinia variegata*) and Sindhure (*Mallotus philippensis*). The ground vegetation is dominated by *Curcuma leucorrhiza* and *Costus speciosa*.

Sal-Pine (*Shorea robusta*- *Pinus roxburghii*) Forest: Along the north-eastern aspect of Churia, between 500m to 700 m asl, Sal (*Shorea robusta*) is characteristically associated with chir-pine (*Pinus roxburghii*). Sal trees in this association are relatively dwarf and ground cover is relatively poor (Shrestha 1989).

Pine (*Pinus roxburghii*) Forest: Above 700m asl Chir-pine (*Pinus roxburghii*) is dominant in the south-facing slope of the Churia hills. The presence of other species are limited probably due to extremely low substrate moisture.

Sissoo (*Dalbergia sissoo*)-Khair (*Acacia catechu*) Forest: Khair-Sissoo association grows on the floodplain areas of of Bhalu Khola, Mahadev Khola, and Doharam Khola. Dense patches of *Saccharum bengalenses* intermix with this association.

A total of 336 plant species have been reported from PNP (Annex I) and at least 60 species found in the Park are edible (Dhakal, 1999).

## **2.5.2 Faunal diversity**

### **Mammals**

PNP harbours a variety of resident and migratory wildlife. There is record of 37 species of mammal in the park (Budha and Chaudhary 1998, BPP 1995). The mammalian diversity of the Park is presented in Annex II. Out of them, 8 species are listed as protected species under NPWC Act 2029 viz. Asian Wild Elephants (*Elephas maximus*), Royal Bengal tiger (*Panthera tigris*), One horned rhinoceros (*Rhinoceros unicornis*), Gaur (*Bos gaurus*), Pangolin (*Manis pentadactyla*), Four horned antelope (*Tetracerus quadricornis*), Wild dog (*Cuon alpinus*) and Striped Hyena (*Hyaena hyena*).

There are 60-65 residential population of Asian wild elephants, and these elephants mostly roam within the Park and are regularly observed in Rambhori–Bhata, Lauki Daha, Charbhaiya and Mahadev, Ghodemasan, Halkhoria areas and along the streams running down from Churia. Elephants also move outside the Park after the monsoon season is over. The herd sometimes travel further east to Bagmati river-- Similarly, 41 Bengal tiger, 3 Rhinos, 164 Gaur are among other large mammals found in the Park (PNP 2079/80).

Other mammalian species include Spotted deer (*Axis axis*), Barking deer (*Muntiacus muntjak*), Hog deer (*Axis porcinus*), Sambar deer (*Rusa unicolor*), Leopard cat (*Felis bengalensis*), Jungle cat (*Felis chaus*), Fox (*Vulpes bengalensis*), Jackal (*Canis aureus*), Rhesus monkey (*Macaca mulatta*), Langur (*Presbytis entellus*), Sloth bear (*Melursus ursinus*), Porcupine (*Hystrix indica*), Long-tailed tree mouse (*Vandeleuria oleracea*), Indian mole rat (*Bandicota bengalensis*), Great bandicoot (*Bandicota indica*), and Squirrel (*Funambulus pennaii*). List of all mammal species found in PNP is presented in Annex II.

### **Avifauna**

The Park is equally rich in avian diversity as 490 species of avian fauna are reported (BPP, 1995). Due to diverse topography, the density and diversity of avian species are high in Bhata, Shikaribas and Pratappur areas. Budha and Chaudhary (1998) listed 155 species of birds from these three areas.

Two species of endangered and threatened birds; the Giant hornbill (*Buceros bicornis*) and Lesser adjutant (*Leptotilos javanicus*) are reported in Bhata, Shikaribas and Pratappur areas. Other important species include Tawny eagle (*Aquila rapax*), White eyed hawks (*Butaster teesa*), Kaleej pheasant (*Lophura leucomellana*), Spotted owl (*Antheno brama*), Forest eagle owl (*Bubo nepalensis*), White breasted kingfisher (*Halcyon symensis*), Brahminy myna (*Sturnus pagodarum*), Green Magpie (*Cissa chinensis*), White checked Bulbul (*Pycnonotus leucogenys*), Gray winged Black Bird (*Turdus boulboul*), Eurasian tree pipit (*Anthus trivialis*), Purple sunbird (*Nectarinia asiatica*) and different species of doves (Annex III).

### **Reptiles**

BPP (1995) and Budha and Chaudhary (1998) listed 13 species of reptiles (Annex IV). Python (*Python molurus*) and King cobra (*Ophiophagus Hannah*) are distributed in the Churia and its foothills. Among these two, the Nepalese law protects python. Common reptiles found in the area are: Garden lizard (*Calotes versicolor*), Monitor lizard (*Varanus bengalensis*), Common krait (*Bungarus careleus*), Branded krait (*Bungarus faciatus*), Common cobra (*Naja naja*), and common Rat snake (*Ptyas mucosus*).

### **Amphibians**

Three amphibian species, Painted bull frog (*Kaloulo pulchra*), Globular frog (*Uperodon globulosu*) and Jerdon's bull frog (*Rana crassa*) are found in this Park (BPP, 1995).

### **Pisces**

In PNP, 8 species of fishes are reported (BPP, 1995) which includes *Cudusia chapra*, *Gudisia godanahiae*, *Notopterus notopterus*, *Catla catla*, *Cirrhinus mrigal*, *Cirrhinus reba*, *Puntius sarana* and *Puntius sophore* (Annex V).

### **Invertebrates**

A large number of invertebrates such as molluscs, earthworms and arthropods are commonly reported. Many millipede and centipede species can be found crawling on the forest floor. In the PNP forest, many insect species can be found, including ground beetles, dung beetles, grasshoppers, crickets, stick insects, bugs, and termites. The area is also home to a plethora of spider and scorpion species. Many different types of butterflies and moths can be seen flying around the park. Similarly, 31 butterfly species have been reported from the PNP (Budha and Chaudhary, 1998). Annex VI contains a list of the butterflies found in the Park.

### **Protected Species**

The Park is home for several species of fauna and flora protected by NPWC Act, 2029 as a Schedule I species of Nepal. Asian elephant (*Elephas maximus*), Gaur bison (*Bos gaurus*), Royal Bengal tiger (*Panthera tigris tigris*), Striped hyena (*Hyaena hyena*), Asian one-horned rhinoceros (*Rhinoceros unicornis*), Python (*Python molurus*), Giant hornbill (*Buceros bicornis*), Lesser adjutant (*Leptotilos javanicus*), and Sarus Crane (*Grus antigone*) are some major protected species of Nepal. Among the plant species, Satal (*Dalbergia latifolia*) is already rare due to large scale extraction in the past.

## Chapter III

### 3. Past and Present Management Practices

#### 3.1 Conservation History

Prior to the Rana regime (1846-1950), Nepal's wildlife conservation history was not well documented. According to one of the earliest accounts, the Terai forests were underutilized between 1760 and 1770 because they provided strategic protection against invasion by the East India Company. King Prithvi N. Shah and his descendants considered keeping the Terai forests in their natural state. 2009 (Mishra). As a result, when Rana came to power, the entire Terai and inner-Terai, including the Chitwan valley, was covered in dense Sal (*Shorea robusta*) forest. It was popularly known as Char-Koshe-Jhadi and provided plenty of wildlife viewing opportunities. The Terai forest was first exploited by the Rana rulers as a hunting ground for big game, then as a source of revenue through timber export and conversion of forests into agricultural land to generate land tax. They designated Chitwan Valley and other designated forests as a privileged class hunting ground for Rana elites and their distinguished guests from the European and Indian Royal families. Jung Bahadur Rana organized a hunting camp for King Edward VII in March 1876 and managed to gather 800 elephants, which is remembered as one of the most extensive huntings in history. Hunting record showed as many as, 120 tigers, 38 rhinos, 27 leopards and 15 bears were killed by a hunting party in a single hunting event. It is said that Juddha Shamsheer Rana killed 433 tigers, 33 rhinos, 93 leopards, 22 bears, 20 crocodiles, 1 wild buffalo, 3 elephants (captured) and many wild dogs, hyenas, deer and other small animals during seven hunting seasons from 1933 to 1940 (Chand 2000). Nevertheless, such irregular big hunting hardly affected the total population of wildlife. In fact, Jung Bahadur Rana declared the rhinoceros as a Royal Game Animal in 1846 and stringent punishments were inflicted to the poachers (Mishra 2009).

Commercial exploitation of the Terai forests began in the first quarter of the twentieth century, when Northern India's railway network was expanding. Mr. J.B. Collier of the British Indian Forest Service was the GoN's advisor at the time (from 1925 to 1930). With the endless demand for timber and boulders in mind, he suggested generating revenue by supplying timber to India through intensive felling of Terai forests and development of agricultural land. During that time, massive deforestation occurred in Terai (Hamilton 1819, Agrawal 1976, and Bajracharya 1983).

When the Rana regime fell in 1950, there were still plenty of forests and wildlife in Terai because it was dangerous to come down to Terai due to deadly malaria infections. The situation deteriorated when an exodus of hill migrants began to cut and burn the Terai forest as part of the government's resettlement program launched following the successful eradication of malaria in the 1960s. During this time, a large area of Terai forest has been lost.

### 3.2 Protection of the Park

Park is divided into 2 sectors, 4 range posts and 11 guard posts for regular surveillance, monitoring and protection of species and their habitats (Figure 7). The sector offices are led by Assistant Conservation Officers (ACOs) supported by rangers, senior game scouts and game scouts. Under sector office, there are range posts headed by ranger supported by senior game scouts and game scouts. Range posts are responsible to take care of guard posts which are led by senior game scout. Apart from this, there are also Elephant Care Facility (ECF) at 3 locations (Amlekhgunj, Bhata and Pratapur) with elephant care takers. The ECF are tied up with either sector office, range post or guard post and support Park staff and security units to patrol inside the dense forest including controlling problem wildlife, wildlife monitoring, and wildlife rescue. The Park staffs are provided with essential field gear, ration and equipment for Park protection.

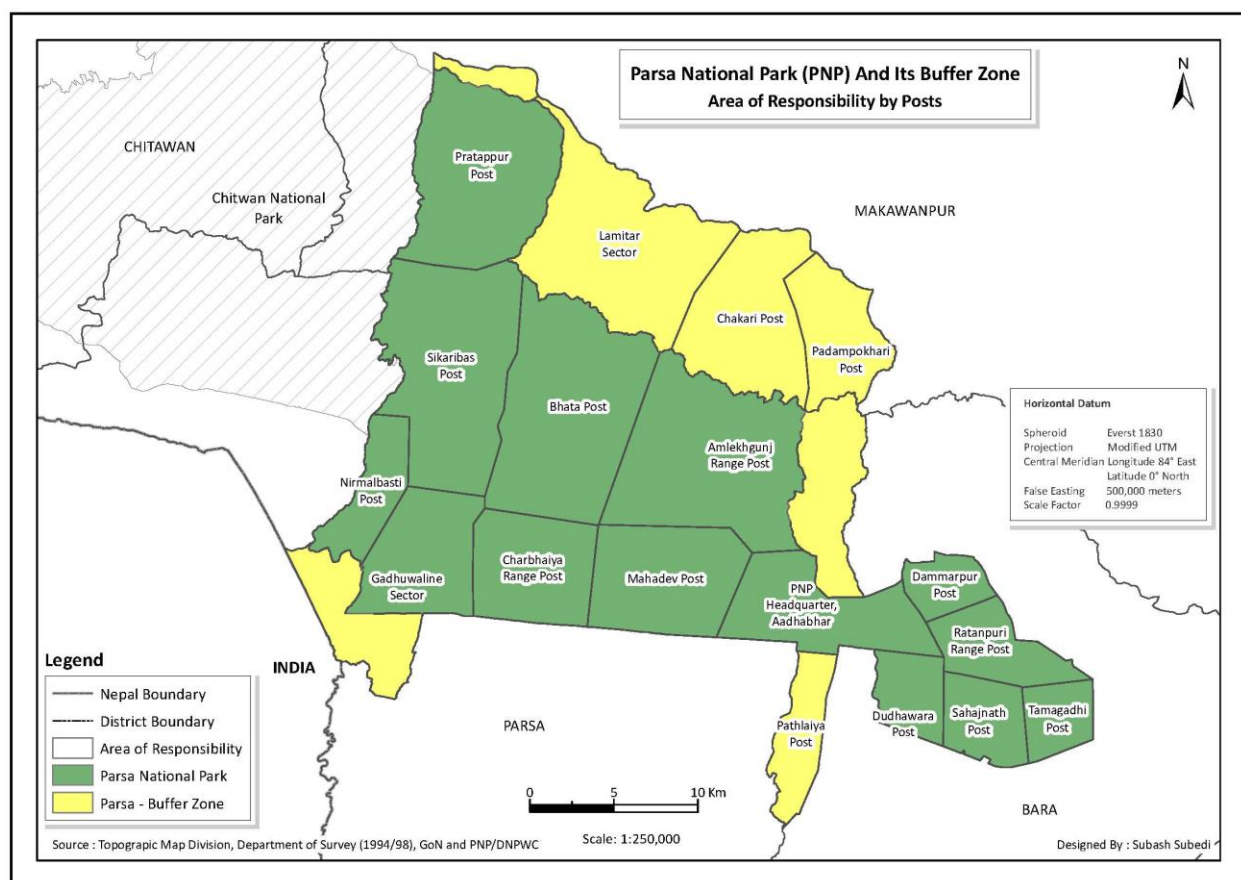


Figure 7: Area of responsibility

The Nepali Army has been deployed at 16 security posts stationed at strategic locations. At present, mobilization of Army is not limited to core area only. Existing Standard Operating Procedures (SOP) provides the responsibilities to carry out patrolling duties in the BZ as well. Among these posts, 16 posts are combined with both Park staff and NA, 2 posts (Pathlaiya and Padam pokhari) are with Park staff only. Park staff/Nepal Army, deployed in these posts, carries out regular patrol to their respective areas to ensure that there are no illegal activities in the core

area and it's BZ. Patrolling is done either by foot or by bicycle, motorcycle, vehicle or elephant back and by boat depending upon the situation and terrain. In addition to regular patrolling, occasional sweep and combing operations are also undertaken during monsoon period in sensitive areas. Night patrolling is also done when needed.

Monitoring of salt licks, waterholes, potential locations for electrocution and encroachment is done periodically. The park has installed CCTV cameras at Park headquarters, Lamitar and Gaduwaline sectors to monitor the visitors entered in the park premises. In addition, 5 spy cameras and 4 biological monitoring cameras have also been placed in strategic location to monitor illegal activities. With a view to enable easier and effective mobility, a network of roads including bridges have been upgraded and maintained. These roads also serve as forest road/fire line during summer-time. Some of the effective measures that have been put in place are described hereunder.

- Anti-poaching operations jointly by Anti- Park authority and Nepal Army;
- Joint Operation Cell (JOC);
- Short-Range, Medium-Range and Long-Range Patrols including sweeping operation;
- Real time SMART patrolling;
- Installation of CCTV cameras at sensitive areas;
- Installation of spy cameras at strategic locations;
- Rapid Response Team (RRT) mobilization; and
- Community Based Anti-Poaching Unit (CBAPU) engagement to raise awareness against wildlife crimes;
- Close coordination with district level Wildlife Crime Control Bureau (WCCB);

### **3.3 Habitat Management**

Food, water and cover are main components of wildlife habitat. Grasslands, wetlands, shrubs, forests and dry lands are some major factors which provide food, cover and water to the wildlife. Ultimately, this will be beneficial for maintaining a viable population of threatened wildlife and mitigating human wildlife conflict. The main focus of the habitat management program is to maintain the existing grasslands and wetlands in order to maintain the prey population.

#### **3.3.1 Grassland**

Grassland ecosystem is dynamic and productive and plays key role to provide suitable habitat for wildlife and birds. It provides important ecosystem services such as soil conservation, water regulation, and carbon sequestration. Grassland management involves sustainable use and conservation of grassland ecosystems to support biodiversity, livelihoods, and the overall well-being of local communities. The grassland has to be managed in such a way that it provides not only feeding but also cover to wildlife. When the area was declared as Parsa Wildlife Reserve in 1984, there were grasslands nearby river created by the fluvial action only. However, a small

patch of Eucalyptus plantation, carried out for research purposes, was cleared to create grassland in the initial period. Similarly, few more Eucalyptus patches were cleared to form more grasslands. After, Rambhori and Bhata settlements were relocated to outside of the core area, the area was also developed as grasslands. The grasslands were also formed in the settlements of Ramauli and Pratapur after they were shifted out of the Park. Creation of grasslands were also done by opening of the canopy by cleaning of shrubs and cutting saplings as well as pole size trees. The open grassland was not favoured earlier due to the fact that invasive species might intrude in the open area. Nowadays, few open grasslands have also been developed. There are altogether 22 patches of grasslands (Rambhori-50, Bhata-55, Gaduwaline 60% opening-30, Pratapur-150, Charbhaiya A-20, Charbhaiya B-25, Ratmato A, 40% opening – 10, Ratmate B – 60 B-60, Sukepokhari A, 60% opening – 40. Sukepokhari B -40, Kali daha A, 40% opening-30, Kali daha B-40, Hatti pokhari A, 40% opening-25, Jamunia khola- 12, Hattipokhari Mahadev route B- 60, Mahadev 60% opening-20, Bagh pokhari 40% opening-10, Aadhavar A-10, Aadhavar B-12, Bhangeri – 10, Sahajnath-60) covering 779 ha.in the Park (Figure 8). Apart from these, there are about 280 ha. of grassland on both sides of Bhata, Pasaha, Jamunia, and Balgaga river maing a total of 1059 ha. grassland in PNP.

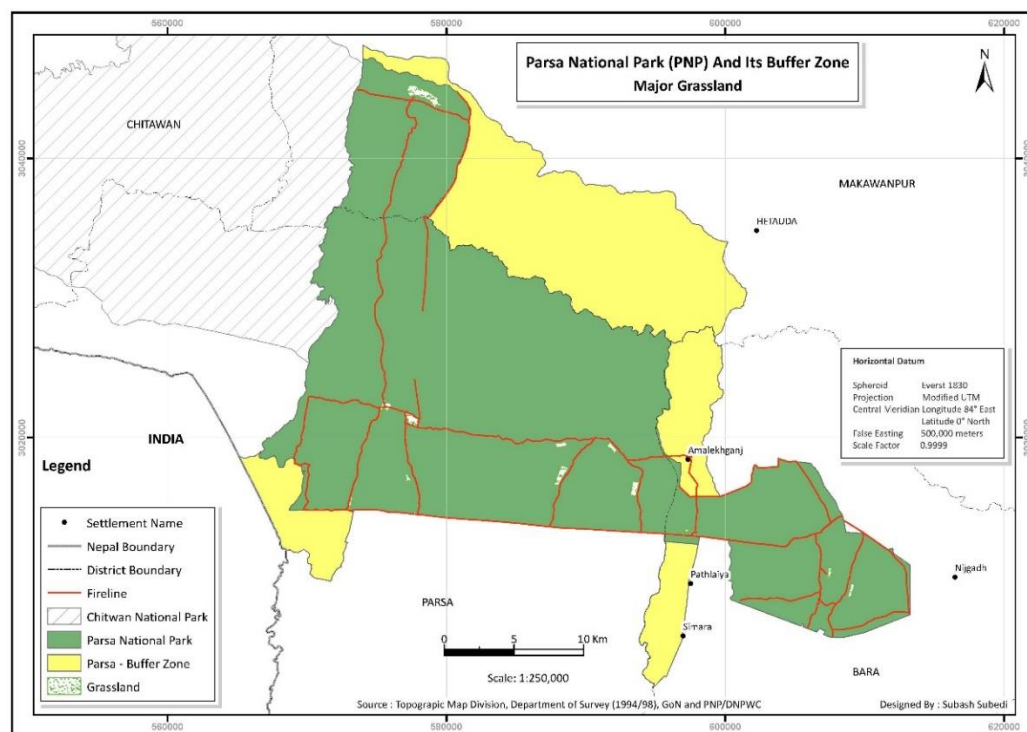


Figure 8: Grasslands in the core area

Currently, management of grasslands have been carried out by cutting of grass, removal of invasive species, control burning, cutting of trees, and allowing khar-khadai to local communities. The grassland management practice is described below.

#### **3.3.1.1 Grass cutting or removal of invasive species**

The grass cutting will be done as per the following:

- Finalize the area of grass cutting or removal of invasive species and prepare estimate for the task;
- Hire local labours and orient them about consequences of working inside the park and and precautions to take to avoid casualty;
- Orient the labors to take kerosene and utensils in the Park to prepare their own food;
- Dispose the waste generated properly;
- Monitor labours so as to control them not to make noise, use of fuelwood while cooking, smoking, management of waste;
- Cut grass manually or mechanically or remove invasive species in a coordinated way;
- Pick the labours and drop them after the work;
- Allow them to stay nearby posts if required;

#### **3.3.1.2 Khar-khadai**

There is a provision of khar-khadai collection for certain days where community people can collect grass and thatch from core area. Thatch grass, which is often used for roofing, is an important resource for local communities. This practice has been misused as local people also do collect fuelwood and timber which is illegal. Similarly, the presence of large number of people inside the core area can disturb the wildlife. Since, it is beneficial to Park as well, it can be practiced in certain area within the area of each BZUC in a coordinated way. The Khar-khadai plan is described below:

- Discuss Khar-khadai plan with BZUCs in a BZMC meeting and finalize the date in various BZUCs;
- Take minute about the rules and procedure to follow by local people;
- Consult with respective posts and security unit about the plan and procedure;
- Place the notice in the BZUC notice board and provide tickets for the entry for each person;
- Appoint local volunteers associated with BZUC to manage the task in order to implement smoothly;
- Check the tickets by Park staff, security personnel, and BZUC volunteer in the entrance;
- Enter the park on foot as no vehicle is allowed
- Collect grass and thatch, carry the load and leave before dusk;
- Monitor local people cutting grass and thatch;
- Check the suspected loads of local people in case they have collected something else other than grass and thatch;

#### **3.3.1.3 Control burning**

Control burning is also undertaken after manual cutting and khar-khadai so that there will be new sprouts which is nutritious for prey base species. If the controlled burning is not implemented

properly, it can create havoc for small mammals as well. So, proper planning must be done before executing control burning. Every year, invasive species are removed by cutting, plucking, and burning. The control burning is usually carried before the windy months and generally undertaken in the evening when the temperature is low. Before the task, the required medicine and bandages and other required is kept in first aid kit is taken. The process of control burning is mentioned below:

- Assess weather conditions by evaluating weather patterns, including temperature, humidity, wind speed, and direction;
- Develop detailed burning plan that outlines boundaries, equipment needed, and contingency measures;
- Orient and train the staffs to be involved in burn activity;
- Prepare site and establish fire breaks and remove hazardous materials;
- Burn from one side and monitor the fire spread allowing even a slow-moving small mammal to escape;
- Monitor fire behavior and control the rate of spread to achieve the desired intensity and coverage;
- Extinguish when the patches are burnt completely or in case it goes out of control;
- Maintain records of the burn operation, including weather conditions, and outcomes

#### **3.3.1.4 Tree cutting**

The forest ecosystem and grassland ecosystem are both essential component of biodiversity conservation in the PAsl park. The woody encroachment has been a major cause of disappearance of grasslands in the national parks due to succession. Even though, to create grassland in the national parks by cutting of trees is not practiced in the earlier days. Therefore, girdling method was used to put an end to the life of the tree as it disrupts the flow of nutrients and water between the roots and the canopy. Girdling is a method of removing trees by creating a complete ring of bark removal around the circumference of the trunk. With this process, tree will die after several years. Nowadays, this old mindset has been discarded and trees are cut to open grassland as it is important for herbivores in the national park. The trees need to be cut to halt the succession process as well since grasslands continued to be converted into woodlands. Following are the current practice of restoring or creating grassland through tree cutting:

- Identify the site for grassland restoration and creation in the Park;
- Prepare a detailed plan that outlines the specific number of trees, methods of cutting, and equipment to be used.
- Identify the specific trees to be cut leaving certain number of trees according to objective of how much canopy cover is require;
- Train the worker to cut trees safely and implement proper safety protocols to protect workers involved in tree cutting operations;

- Cut the fallen tree to desirable size so that timber can be used for internal purpose like wooden bridge making, watch tower construction and renovation, post construction etc. and take it to one corner and stack;
- Dispose of remaining tree debris by chipping, mulching or removing the debris from the site;
- Burn the site on control manner so as to clean the area and burn the tree stump;
- Monitor the outcome of newly restored or created grassland with the response of wildlife;
- Document the remaining timber after use and report it to DNPWC;
- Distribute the timber to the victim of disaster with the decision of disaster management committee under District Administration Office and approval of DNPWC.

### 3.3.2 Wetlands

The major sources of water in PNP are rivers, lakes, ponds and water holes. There are altogether 67 wetlands in PNP and it is divided into perennial rivers or streams, perennial lake, artificially constructed mud water holes and artificially constructd Plain Cememt Concrete (PCC) Waterholes (Figure 9).

There is one river and five streams tha is perennial in nature and have water thoroughout the year. The Rapti river runs along the Park's northern border. It is a significant perennial river flowing westward and passing through CNP. Along the river, it creates an ideal habitat for Rhinoceros. There are 5 other streams in the southern part of the park originated from Chure and runs north-south, namely Shitalpur khola, Shikaribas khola, Bhata khola, Pani tanki muhan and Mahadev khola, which have perennial water flows in the upper part that are channelized to feed the artificially created ponds for wildlife in the dry Bhawar areas. Bhata khola and Mahadev khola are most important streams that provides water in the Park. Bhata khola is originzated from Chure and Deuki daha and disappear around 500 m below the Bhata temple due to porous soil. Similarly, Mahadeve khola is originated from Chure as well and it is channelized and collected in 2\*2 m collection chamber from where the water is distributed to Mahadeve post, Ratomate waterhole and Hatti waterhole through north-south underground pipe. This Mahadev khola also disappears 500 m beneath the intake due to the permeability nature of soil.

Similarly, there are 5 perennial lake in th park mainly Kali daha (lake), Kamini daha, Lauki daha, Deuki daha and Halkhoriya lake to provide water for wildlife. Kali daha is a recently created lake by blocking the flow of Khairee khola by constructing a small dam. Similarly, Halkhoriya lake is also a recently constructed lake by constructing. Halkhoriya lake is very important in the extended area in the eastern part because it provides water for mega-fauna species such as Gaur, Wild elephant, Tigers, and Rhinoceros on a regular basis. Kamini Lake is also being renovated in order to provide water for wildlife. The Lauki daha and Deuki daha are two big natural lakes close to Bhata area. Lauki daha is located in the northern part just below the foothill of chure near Ghode masan. It is inaccessible and this area is preferred by tiger and Wild elephants.

Similarly, Lauki daha is 500 m north of Bhata temple and it is as big as Lauki daha. In Bhata's evacuated areas, there are some man-made fish-ponds. These fish-ponds have been extended to provide water for wildlife and birds.

Similarly, there are 41 artificially constructed mud water holes, where water is fed by the perennial streams and some of them remain dry in the hot summer season. The perennial streams which are used to recharge this pond are mainly Bhata and Mahadev streams. Since the area is dry and soil can not retain water for long, 15 artificial PCC are constructed where water is supplied by water tanker. These PCC water holes have been very important to provide water for wildlife in dry and hot summer.

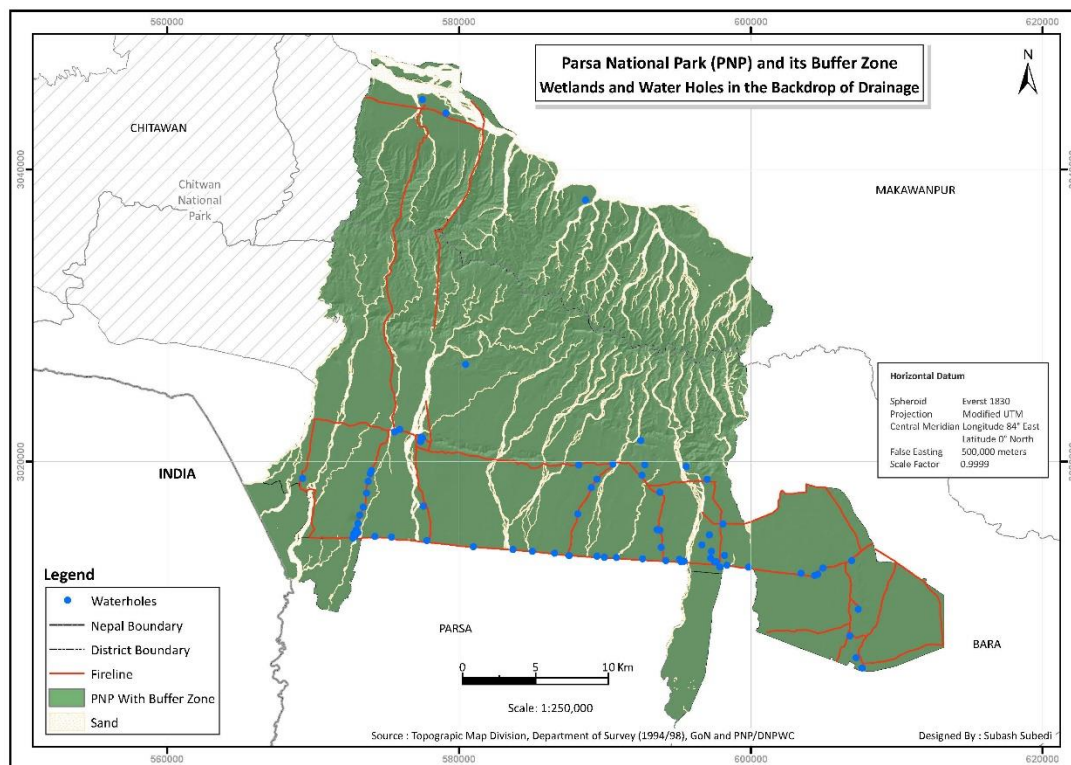


Figure 9: Distribution of wetlands

The following are present practices to manage wetland:

- Explore source of water either perennial or seasonal especially during monsoon season;
- Identify the site of reservoir for both perennial and seasonal source of water;
- Prepare a detailed plan about the construction of surface reservoir for perennial water source on the northern side of the Park including the wetlands and water holes in southern part;
- Prepare a separate detailed plan about the construction of underground RCC reservoir on the northern side of the Park using seasonal water source by channeling water from the

stream using several meters of RCC water canal including the wetlands and water holes in southern part;

- Study the site from where muddy soil, which can hold water, can be obtained;
- Prepare plan for RCC reservoir where recharge of water is not possible, and tank has to be used to supply water;
- Hire labour or firm to construct reservoir or wetlands and waterholes;
- Construct reservoir (surface, RCC underground) and lay underground pipes;
- Soil excavation works of wetlands and waterholes as per the plan;
- Dispose the soil at the appropriate place;
- Bring muddy soil and pour into the newly constructed waterhole to certain level so as to hold water for longer duration;
- Use cement mortar if the soil is too porous;
- Supply water through the underground pipe brought from reservoir or water tanker;

### **3.3.3 Anti-poaching and Intelligence Gathering**

Poaching of wildlife animals and illegal collection of other resources in PNP is under control. However, the northern flank of the Churia range, particularly the inner valleys are potential sites for poaching and illegal collection of forest resources, mainly due to inadequate security mechanism in these areas. Only few security posts exist along the northern border. To avoid the potential risk of poaching, the Park has extensively mobilized a network of informants for intelligence gathering. The existing range posts including those in the northern part of the park are also mobilized to collect information.

An Anti Poaching Unit (APU) led by Assistant Conservation Officer or Ranger oversees all activities to control poaching and other illegal activities in the core area, and in the buffer zone in close coordination with Community Based Anti Poaching Unit (CBAPU). The APU is supported by Management Information System Tools (MIST) that helps to collect and analyze information in a systematic manner. MIST is particularly helpful in monitoring the field patrolling team and other operations conducted by the security staff. Similarly, Real Time Smart Patrolling is also in place to monitor field level activities undertaken by commanders. This provides onsite information regarding surveillance including rescue needs of patrolling team. In addition, there are well-equipped RRT strike forces stationed at.....to monitor their respective areas. Wildlife Crime Control Bureau (WCCB) has also been formed in Bara, Parsa and Makwanpur districts and are coordinated by CCO. The Bureau in each district comprises the representatives from District Administrative Office, NA, District Police Office, Armed Police Force, National Investigation Department, District Attorney General Office, Division Forest Office, Postal Office and other relevant government offices. PNP's APU activities are also closely coordinated with those of CNP and VTR. Besides these, the Central Investigation Bureau (CIB) of Nepal Police provides significant support in intelligence gathering and control illegal wildlife trade.

### **3.4 Tourism and Interpretation**

A well-equipped Visitor Information Center (VIC) is under construction within the premises of the Park headquarters at Adhabhar and is expected to be operational within the running fiscal year. PNP has also planned to establish a VIC in Manahari to disseminate information among people living in the northern part of the park. Tourism entrepreneurs also provide Park information to the visitors through display boards and mobilizing their nature guides.

### **3.5 Research and Monitoring**

#### **3.5.1 Research**

In PNP, several research activities have been conducted by national and international universities, institutions, organizations, and individual researchers particularly on mega mammals like rhino, tiger, and wild elephant. The student research focuses primarily on species, habitat, ecology, wildlife crime, and human-wildlife conflicts. As per the Research Policy 2012, any research activities in the core as well as BZ require pre-approval from DNPWC. For international students, MoFE will issue approval as per the recommendation from DNPWC to undertake studies in the PA. The researchers are also required to report to the Park management on the progress of ongoing research. After completing the study, the researchers have to submit one copy of the study to respective PA and one copy to DNPWC. PNP is one of the least studied Parks and PNP led research activities within PNP are quite limited due to a lack of funding. Altogether 33 studies were conducted in the Park between 1995 and 2022 (APR 2079/80).

#### **3.5.2 Monitoring**

Monitoring wildlife species and their habitats is one of the regular programs in PNP. The guard posts are mobilized to monitor ground situation in their respective areas on a regular basis. A surveillance team represented by Park and Army post staffs also regularly carry out patrolling. The key information collected during the monitoring including sighting of wildlife species, changes in resource conditions, cases of human or livestock interferences, and incidents of human-wildlife conflict, and reported to the headquarters on a monthly basis using a standard format. The frequency of monitoring is increased when deemed necessary. Park has also installed CCTV networks to monitor and gather information from the Park head quarter. A detail progress report is submitted to the DNPWC at the end of each fiscal year.

### **3.6 Human-Wildlife Conflict**

Human Wildlife Conflict refers to a negative interaction between humans and wildlife (HWC). It occurs when the needs and behavior of wildlife impact negatively on humans or vice-versa. These conflicts may result with damage to crops and property, attack and depredation of domestic animals by predators, and incidents of retaliatory killing of wildlife. Major animals associated with HWC include tigers, wild elephants, bears, wild boars, spotted deer, and common leopards. Conflicts between people and wildlife are increasing because of the growing

wildlife populations and human populations around Parks. In PNP, elephant-human conflict is more prominent along the major migratory routes and dispersal areas. A major elephant migratory route in Syaullibasti area was encroached before the establishment of the Reserve/Park. Elephants frequently use this route to move between PNP, CNP and VTR. The Park is one of the key habitats for Nepal's residential wild elephants (n= ca 60-65). Elephants from PNP frequently travel to India's VTR in the south, CNP in the west and Char-Koshe-Jhadi stretched in Rautahat, Bara, Sarlahi, Mahottari, and Sindhuli districts in the east.

Although relief policy has been formulated and with three amendments till 2074 (2017), latest amendment increased relief fund to NRs. 10,00000.00 (Ten Lakhs) to the victim's family in case of death of human being by wildlife inside the PA. Outreach programs organized by Park authorities are also intended to ease such conflicts. Until the economic status of the local communities is improved, poverty levels will continue to fuel conflict between Park and people.

### **3.7 Elephant Care Facility**

Captive elephants are essential for patrolling and monitoring activities within the Park, particularly during the monsoon season. Elephants are also used in research, rescue of animals, and visitor safari. ECF was established in Bhata, around 30 Km west of Park HQ in the year 1984. At present, PNP has 10 elephants including 1 recently born baby elephant. The Park has recently seized 3 private elephants since these private elephants were on the course of transporting for sale. CITES Act 2073 strictly prohibits the trade of elephant. The Elephant Care Facility (ECF) or Hattisar of Dumarbana was moved to Amlekhgunj in 1997. A veterinary doctor is responsible for the health management of these domesticated elephants. For each elephant, three staff (called mahouts, pachuwa and phanits) are deployed for daily care and field patrolling. ECF of Amlekhgunj is open to visitors and has become an important destination for visitors visiting PNP. With the birth of new baby elephant, there is need to recruit 3 additional staffs. Besides, there is also requirement of temporary elephant care takers for 3 seized private elephants.

### **3.8 Rescue and Orphanage Management**

Wild animals suffer from injuries and sickness and are also found in orphaned conditions. They would otherwise perish if their rescue and rehabilitation is not done on time. In recent years, wildlife frequently enters adjacent villages and causes damage to local people, livestock or get retaliated by them. After the declaration of BZ and with the increased level of conservation awareness, local people tend to report such incidents to Park office. Successful rescue operations need timely responses executed by a well-equipped and organized team, and rescues may need to be executed at any time of the day.

Occasionally, common leopards, tigers and elephants enter villages, destroying livestock and injuring or killing people. Cubs left by their mothers, animals injured by poachers, and animals injured due to fighting among themselves are all rescued with due care until they are fully

recovered and released in the wild. Men-eating tigers are captured and most of them are kept in a safe enclosure at rescue center. . Commonly rescued wildlife species include Rock python, Spotted deer, and tiger. At present, there is one injured tiger kept in an enclosure at the Aadhavar rescue centre. There is a dire need for a highly secured well-designed large enclosure with partitions to keep injured or problematic tigers or leopards until they are released in their natural habitat.

In recent years, the park has seen an increase in the number of injured, troublesome, and orphaned wild animals. Rescued animals are either kept in an enclosure or occasionally sent to central zoo. The number of rescued wildlife by the park is on the increasing trend. The Park Annual Progress Report of 2078-79 mentions that there were 287 wildlife rescued and most of them were Turtle (24290), Snake (19), Spotted deer (9), Blue buck (5), Python (4), Civet (2), Leopard cat (2) Owl (1), Barking deer (1) and Leopard (1). The number of rescued wildlife in FY 2077-78 was also found to be 120 wildlife rescued and most of them were Owl (90), Spotted deer (14) and Python (5), Snake (5) and Barking deer (3), Blue buck (3) respectively.

### **3.9 Administration and Organization**

The Park is led by a CCO (under-secretary level) and is based in Park HQ, Aadhavar. CCO is in-charge of overall management of the Park. The Park's headquarters accomodate technical, administrative, financial, BZ, and elephant care facility sections. According to the new organization and management structure, there are 133 approved positions, including the position of Elephant Care Facility (Hattisar staff). Only 83 of the approved positions are currently fulfilled and 28 are recruited in a contractual basis (Annex XII), and the remaining positions will be filled by the Public Service Commission in the near future. PNP has two strategically located sector offices (Lamitar sector in the eastern and Gaduwaline in the western parts) and are led by Assistant Conservation Officers. Both Sector offices supervise 4 Range posts and 11 Guard posts under their respective jurisdictions. These positions are in- charge of performing technical and administrative tasks. Nine elephants are mobilized from Bhata, Pratapur, and Amlekhgunj posts for regular patrolling and catering services (safari) for visitors. An additional ECF is proposed for Halkhoriya.

The location of sectors, range posts and guard posts alter as per the field situation. Therefore, service delivery of sectors, range post in the field does not match according to approved OM. Previously the western sector was administered by Bhata instead of Gaduwaline. Similarly, sector could not be established in Padam pokhari due to public pressure. In addition to this, Churiamai range post is yet to be established due to the opposition of local people. Instead, range post has been administered from Chakari. The guardpost in Halkhoriya also has not been established and proposed in the first year of the five-year plan. Some of guard posts (Jeetpur, Deurali and Hadikhola) from approved OM have been shifted to other area of Ratanpuri, Tamagadi, Sahajnath and Dambarpur due to the change in field situation.

### **3.10 Achievements of Preceding Management Plan**

The management plan of PNP and its BZ 2075/76-2079/80 includes the management of core area as well as BZ. The management of core area deals under different thematic areas - Park protection, habitat management, fire control, wildlife health service, and encroachment control; research and monitoring, capacity building; implementation of species conservation action plans for protected species; tourism management; climate change adaptation; and solid waste management. Similarly, BZ management deals with conservation, community development, income generation and skill enhancement and conservation education. It also incorporates the five-year plan of all 13 BZUCs. The plan's accomplishment included the infrastructure development in the headquarter, sectors and guard posts; construction of watch towers, extension of fire line, creation of grasslands and wetlands; econcroachment control; tourism infrastructure development; species conservation mainly control and management of problem wild-elephant, strengthening of BZ institutions and maintain human wildlfie amity.

The previous management plan of Park and its BZ (2075/76-2079/80) estimated the budget at NRs. 94,73,27,166 and the total budget spent by Park within the five years (including the budget of Chure conservation, ZSL, NTNC, NoC and Others) was around NRs. 729,970,290 which is 77% of the planned budget. Referring to the APR of the last five years, it reflects that most of the activities are adopted from the management plan and a large share of budget was spent in infrastructure development. The budget allocated for tourism development and promotion, study and research, and BZ management was inadequate.

Above all, status change from Reserve to National Park is a welcome opportunity to develop tourism and promote it to contribute towards economic development of the region. The establishment of the Park and security units in the extended areas as well as in the Shikaribas area has been one of the important achievements. The presence of these security units and posts have been effective not only in controlling illegal activities but also in delivery of administrative and technical services. The posts establishment in the extended area has been resulted in the very good habitat for the tigers and Wild elephant. The posts nearby Chure are yet to be established to cover the gap areas. Simiarly, coordination has to be made with Divisional Forest Office for the survilleince and regular patrol in the collaborative forests which is joined with core area.

The creation, restoration, and management of grasslands and wetlands have led to the conservation of protected species. The grassland in PNP has doubled in the last five years as it reached to 1059 ha. from 530 ha. The approach of 40% and 60% opening to create grassland has been good attempt to suppress the weeds in the dry bhavar region. Water is scarce below the Chure area as soil is porous and can not hold water for long. The Park created Kali daha and Halkhoriya lake by construcing dyke to hold water of rivulets flowing from Chure. These two wetlands have been considered lifeline of the Park as water is available even in the dry period and wildlife sighting is very high in these two areas specially in the dry season. In addition to

this, the Plain Cement Concrete (PCC) ponds were also created in the dry areas and water was supplied by water tanker. There are now 67 wetlands and waterholes compared to 21 before the implementation of the plan. With the improvement in the habitat the prey base species increased from 22 to 75 per square kilometer from 2018 to 2022. Which in turn contributed to increase the number of tigers (18 to 41) and its density (0.92 to 1.74 per hundred square kilometer) from 2018 to 2022 (Figure 10).

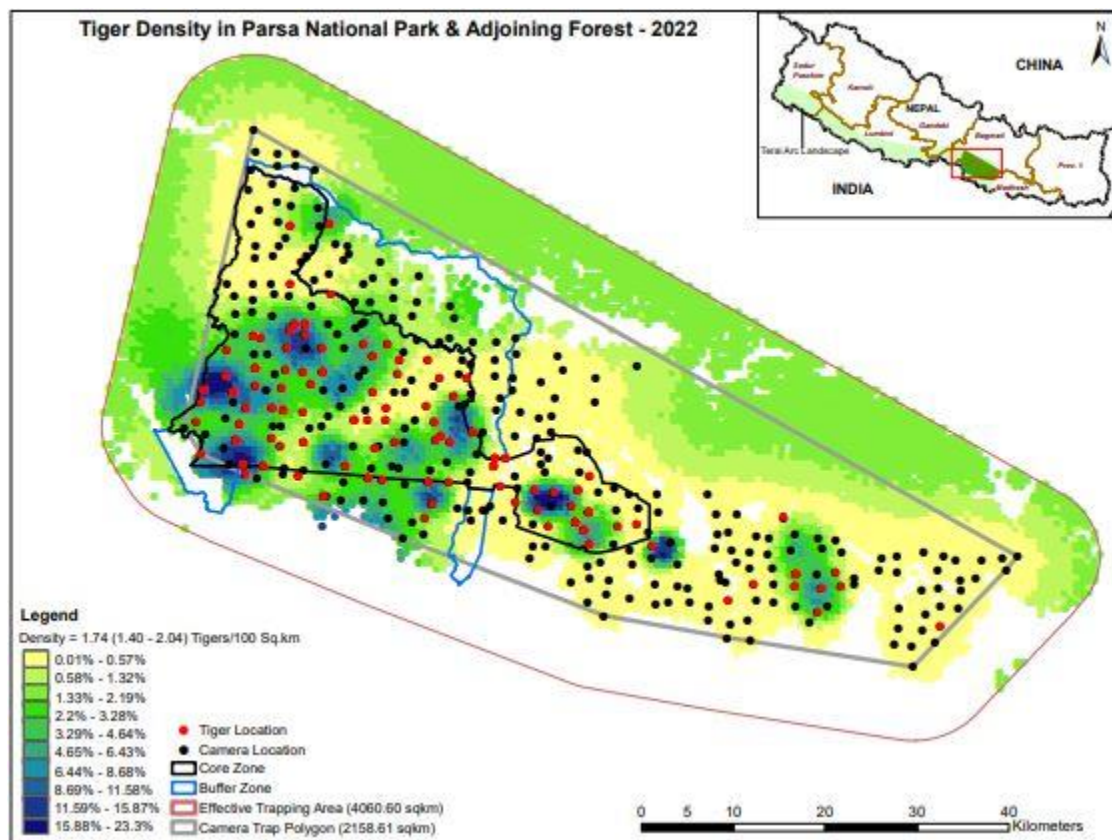


Figure 10: Tiger density in the Park (Source: Status of Tiger and Prey in Nepal 2022)

During this time, several watch towers were built, fire lines were extended, and wooden bridges were maintained. The Park initiated cement mortar foundation with wooden plank over it in bridge construction and maintenance to extend its durability and reduce maintenance costs. Similarly, elephant safari for the visitors has been launched at Amlekhgunj. There are three jeep safari vehicles in operation. One jeep safari is operational in Aadhar, while two others are managed by tourism operator of Nijgadh and Sunakhari BZUC of Subarnapur. The vehicle that was used in jeep safari in the Subarnapur area was provided by Madhesh Province. Similarly, nature guides have developed to guide visitors into the Park during jungle drive and jungle walk.

The communities developed and implemented the BZ management programs with the assistance and supervision of Park staff. In this regard, a number of community forests have been handed over, livelihood training to create self-employment has been imparted, small infrastructure has

been built, eco-clubs and CBAPUs units have been mobilized, and various important conservation days and events have been celebrated to raise conservation awareness. Relief to the victims from wildlife has been delivered as per the Relief Guideline 2074 (2017). The physical achievement against the target is presented in Table 2.

Table 2: Physical achievement against the target

| Activities                                                             | Target | Achievement | Remarks                                                                                                                                                                                                                                                              |
|------------------------------------------------------------------------|--------|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Building construction (No.)                                            | 3      | 7           | 4 additional building are constructed at HQ that included CCO quarter, Rangers quarter, Game Scout quarter and VIC                                                                                                                                                   |
| Post construction (No.)                                                | 7      | 3           | Out of 7 only 3 posts in Dambarpur, Shikaribas and Pathlaiya has been constructed. The posts in Chure area has yet to be established. Similarly, 4 posts in the extended area (Ratanpuri, Sahajnath, Tamagadhi and Dudhaura) in eastern part has also been restored. |
| Post renovation (No.)                                                  | 20     | 23          | The posts that required renovation across the Park were undertaken                                                                                                                                                                                                   |
| Fire line construction (Km)                                            | 70     | 68          | Altogether 70 Km of fireline has been constructed mainly Bhata-Pratapur fireline, Lamitar-Pratapur fireline and fireline in an around new extended eastern area.                                                                                                     |
| Repair and maintenance of fire line (Km)                               | 625    | 609         | The maintenance of fireline has been undertaken very year mainly after monsoon or before the onset of winter season.                                                                                                                                                 |
| Wooden bridge construction (No.)                                       | 10     | 15          | 5 more wooden bridge has been constructed against the target.                                                                                                                                                                                                        |
| Repair and maintenance of wooden bridge (No.)                          | 10     | 23          | Some of the wooden bridge required maintenance 2 or 3 times in five-year period. Thus 23 wooden bridge has been repaired and maintained.                                                                                                                             |
| Opening of new grasslands (Ha.)                                        | 500    | 490         | In this plan period 40% and 60% canopy opening was preferred and around 300 ha. of open grassland has also been created in the plan period.                                                                                                                          |
| Creation of 30 m grassland opening on the both sides of fire line (ha) | 1400   | 25          | Only 25 ha of fire line was established on the Aadhava-hattipokhari fireline route.                                                                                                                                                                                  |

|                                                      |      |      |                                                                                                                                                                  |
|------------------------------------------------------|------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Management of existing grassland (Ha.)               | 1500 | 1279 | Management of grasslands is undertaken by manual cutting, uprooting and control burning after dry period.                                                        |
| Construction of new wetlands (No.)                   | 45   | 26   | Only 26 wetlands have been created against the target of 45. It is mainly because finding the source of water in the Bhavar area is difficult.                   |
| Watch towers                                         | 10   | 20   | Altogether 20 watch towers have been built which is double the achievement against the target.                                                                   |
| Repair and maintenance of existing wetlands (No.)    | 40   | 54   | Wetlands are restored by channeling water into the ponds and waterholes and earthen work is carried out to maintain the pond.                                    |
| Rescue and orphanage center                          | 1    | 1    | One orphanage and rescue center was established in Aadhavar. The rescue center can hold two tigers or leopard.                                                   |
| Construction of elephant shade houses                | 0    | 3    | The shade house construction was not planned in the five year plan. However, 3 new shade houses have been constructed.                                           |
| Elephant shade house repair                          | 5    | 2    | Two shade houses have been repaired and maintained.                                                                                                              |
| Entry gate establishment                             | 8    | 5    | 5 entry gates have been operational at Lamitar, Gaduwaline, Amlekhganj, Pratapur, Sahajnath. The Aadhabhar is already operational                                |
| Peeping tower                                        | 0    | 1    | The peeping tower was not planned. However, one peeping tower has been constructed at Halkhoriya lake.                                                           |
| Construct elephant bath tub                          | 1    | 0    | The elephant bath tub could not be implemented in the planned period                                                                                             |
| Pilot Solar water pump                               | 5    | 2    | Two solar pumps were piloted at Kali daha and Pratapur                                                                                                           |
| Pilot early warning system for problem Wild elephant | 1    | 2    | The piloting of early warning system has been installed at Amlekhgunj and Gaduwaline                                                                             |
| Erect Solar fence (Km)                               | 10   | 40   | Solar fence was erected in Manahari (Pratapur, Rajaiya, Padampokhari, Dillipur), Subarnapur, Amlekhgunj, near by postmore than the target to decrease human wild |

|                                                             |   |      |                                                                                                                                                                                        |
|-------------------------------------------------------------|---|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                             |   |      | elephant conflict                                                                                                                                                                      |
| Erect mesh net fence (Km)                                   | 0 | 9.85 | Although mesh net was not planned however, 9.85 Km of mesh net have been erected at Amlekhgunj, Pathlaiya and Subarnapur                                                               |
| Tiger count (No.)                                           | 1 | 1    | Accomplished                                                                                                                                                                           |
| Rhino count (No.)                                           | 1 | 1    | Accomplished                                                                                                                                                                           |
| Gaur count                                                  | 1 | 1    | Accomplished                                                                                                                                                                           |
| Establish multipurpose VIC at HQ                            | 1 | 1    | VIC is under construction and it has to be upgraded to the multipurpose VIC with documentary showing hall, museum, and souvenir shop                                                   |
| Highway flyover bridge construction with the support of DoR | 1 | 0    | The plan proposed Department of Road to construct highway bridge in the east-west highway to allow safe movement between the forest. It is yet to be materialized.                     |
| Establishment of BTS tower for mobile communication         | 3 | 1    | In the plan period 1 BTS tower was installed at Aadhavar. The plan to establish BTS in chure is yet to be done.                                                                        |
| Construction deep boring                                    | 0 | 1    | Although it was not planned one deep boring was established at Aadhavar which was operational for 3 years. At present, it is not working due to decrease in water table in dry season. |

### 3.11 Strength Weakness Opportunity Threat (SWOT) Analysis

#### 3.11.1 Strengths

- It is one of the important part of TAL as well as Chure Terai Madhesh Landscape (CTML) and has landscape contiguity with CNP and VTR of India through Shikaribas corridor;
- Support to environmental and social safeguard through Chure conservation;
- Conservation of globally threatened wildlife species attracts global conservation organizations for partnership;
- Well organized institutional arrangement to conduct conservation programmes and security of the Park;
- The Asian wild elephant population draws attention of GoN along with global community for its conservation;
- Increasing number of endangered wildlife species such as tiger, gaur, and Asian Wild elephant;

- well-established mechanism for participatory biodiversity conservation;
- The Park is included in the Important Plant Area (IPA) of Nepal;
- The Park is included in the IBA identified by BirdLife International;
- Provides refuge for globally significant wildlife species, mainly wild elephant, tiger and one horned rhino.

### **3.9.2 Weaknesses**

- Water scarcity due to the porous soil across Bhavar and Chure range;
- Poachers can take advantage of public right of ways for poaching and illegal collection of park resources. ;
- Inadequate studies to find out mechanism to slow down natural succession of grassland into woodlands;
- Inadequate Park staffs;
- Inadequate tourism infrastructures such as information centre, ticket counter and entrance gate etc.;
- Inadequate physical resources and means to undertake day to day operation and management.
- Poor and marginalized household in the buffer zone poorly benefited from tourism; and
- Dependency of BZ communities on park resources for their daily need of grass, fuel wood, thatch and fodder;
- Resources ownership and revenue distribution in the BZ is matter of issue between local Government and Park authority;

### **3.9.3 Opportunities**

- Potential site for the Madhesh Province and GoN to generate revenue by developing tourism infrastructure for national and international visitors;
- Accessible location of the Park from Kathmandu, Hetauda, Birgunj of Nepal and very near to the border of India to attract national and international tourists;
- Possibility to raise income of local people by tourism-based business, enterprises and jobs;
- The larger complex in the lowland Terai of PNP-CNP-VTR, much larger landscape for wildlife conservation, can attract joint funding;
- Increasing population of key wildlife species such as Wild elephant, tiger, Gaur bison, rhinoceros and leading to greater sighting opportunities for tourists;
- Diversification of eco-tourism and involvement of local people in such enterprises,
- Research opportunities through collaboration with conservation partners and academic institutions; and
- Undertake various research and studies in collaboration with conservation partners and implement the findings in PNP.

#### **3.9.4 Threats**

- Over exploitation of sand, gravel and stone posing threat to biodiversity conservation;
- High speed of roadways accidentally kills wildlife;
- Human Wild elephant conflict (HEC) has been a challenge for a long time;
- Human-Tiger conflict ;
- Retaliatory killings of wildlife;
- Habitat loss and fragmentation due to encroachment in the BZ;
- Poaching continues to be a threat ;
- Illegal timber smuggling; and
- Possibility of habitat fragmentation after highway expansion, if appropriate safeguard measures are applied.

## **Part B- The Proposed Management**

## **Chapter IV**

### **4. Vision, Goal and Objectives**

#### **4.1 Vision**

To protect rare, endangered and threatened wildlife with special focus to protected species mainly Wild elephant, tigers, Gaur bison, rhino with appropriate protection strategies.

#### **4.2 Management Goal**

To conserve biological diversity of the Park with special focus on protected wildlife species including wild elephant and tiger through restoration, improvement and management of wildlife habitat and contribute towards prosperity of local people.

#### **4.3 Management Objectives**

- To protect rare, endangered and threatened wildlife with special focus to protected species mainly Wild elephant, tigers, Gaur bison, Four horn antelope, and rhino with appropriate protection strategies;
- To restore, improve and manage habitat and improve connectivity to contain wildlife in the Park and BZ forests thereby maintaining viable population of protected species mainly Wild elephant and tigers;
- To develop tourism infrastructure in order to promote sustainable tourism by involving private entrepreneur so that locals benefit from increased socio-economic opportunities while minimizing and mitigating negative impacts to maintain ecological integrity and cultural heritage;
- To enhance participatory biodiversity conservation by empowering BZ communities while decreasing the risks of climate vulnerabilities and improving livelihood of local people;
- To maintain human wildlife amity by addressing issues related to HWC; and
- To strengthen institutional capacity of Park and BZ through research, capacity building, coordination and collaboration.

#### **4.4 Major Problems, Gaps, Issues, in achieving objectives**

##### **Problems**

- Encroachment of fringe areas of the Park;
- Invasion by weeds affecting grassland ecosystem;

- Illegal collection of herbs and other specific plants and wildlife species;
- Illegal grazing in the core area;
- Illegal harvest of timber and smuggling from south-west part of the Park;
- Wildlife-vehicle collision between Amlekhgunj-Pathlaiya-Nijgadh;
- Riverbed rise;
- Illegal collection of sand, gravel and boulders from the Churia region.

### **Gaps**

- Inadequate areas of grasslands and poor maintenance of existing grasslands;
- Inadequate wetlands or water holes and poor maintenance of artificially created water holes;
- Limited fire-management capacity;
- Inadequate and insufficient interpretation facility, ticket counter for visitors;
- Lack of cultural museum to aware the visitors
- Inadequate sign boards and signage;
- Watch towers, bridges and fire lines poorly maintained,
- Poor documentation of research results and monitoring results and other management activities;
- Inadequate publicity of the Park
- Inadequate wildlife rescue and orphanage centres
- Inadequate infrastructures in the BZ: All weather road, lack of safe drinking water, inadequate medical services, inadequate health and hygiene facilities, poor irrigation facility, and inadequate veterinary services.

### **Issues**

- Human pressure to wildlife habitat;
- Risk of disease transmission from livestock to Wildlife;
- Large, linear infrastructure: high tension lines, highway extension, petroleum pipe-line;
- Management of orphan, injured and release of wildlife;
- Disturbance by religious crowds in Bhata especially during month of Shrawan to offer water to Dugdeshwor mahadev;
- Any issue due to shared border with CNP and from transborder areas; and
- Drying of water sources due to prolonged climate related drought.

## **Chapter V**

### **5. Management Strategies**

#### **5.1 Boundaries**

##### **5.1.1 Legal**

According to the NPWC Act of 2029, PNP (627.39 km<sup>2</sup>) and its BZ (285.3 km<sup>2</sup>) were declared. The PNP and its BZ boundaries are well defined and have been duly notified through publication in the Nepal Gazette (Annex VII). When it was established as a Wildlife Reserve, the park's area was only 499 km<sup>2</sup>. Since, it is a very good habitat for wildlife, particularly rhino, tiger, and wild elephant, an area of 128.39 km<sup>2</sup> was added to it in 2015, including Halkhoriya Lake.

##### **5.1.2 Administrative**

The Park's administration is led by CCO based at the headquarters. Three ACOs work under CCO and are in charge of leading three sectors located in Gaduwaline (Western), Aadhavar (Mid), and Lamitar (Northern). These sectors carry out administrative and technical tasks delegated by the headquarters. Rangers, who lead Range Posts and communicate with BZ communities, assist ACOs in carrying out Park activities. Guard Post is the Park's smallest administrative unit, managed by a Senior Game Scout or a Game Scout and responsible for delivering the work assigned by the Range Post. PNP has two sector offices (Lamitar and Gaduwaline) led by Assistant Conservation Officers and supervise 4 Range posts and 11 Guard posts under their respective jurisdictions. These positions are in charge of performing technical and administrative tasks. In addition to administrative positions, the NA has 16 security positions deployed for wildlife protection. Thirteen BZUCs help implementation of the BZ program. BZMC manages the fund received as per BZ regulation as envisioned in NPWC Act, 2029 and coordinates overall program implemented in BZ.

##### **5.1.3 Ecological**

PNP, CNP, and VTR of India form a TCU of 2,460 km<sup>2</sup>. This can be expanded further by adding forest patches near Amlekhgunj and national forests to the east up to the Bagmati River in Rautahat district.

#### **5.2 Zonation**

Zonation is a powerful management tool that enables the spatial management of a PA while also allowing for the sustainable use of the landscape for tourism and other non-materially altered purposes. By zoning, managers can achieve different management goals in different parts of the PA. This ensures a balance of conservation and development goals and enables planners to concentrate proposed conservation and development activities and resources on different zones based on the management objectives of specific sites within the PA.

### **5.2.1 Management Facility Zone**

This is the area of the Park where the infrastructures for office and staff housing, including Hattisar and security personnel, has been built. This zone houses the headquarters of the Park and NA, as well as sector, range post, and guard posts in strategic locations. Residents, researchers, and visitors can access administrative, museum, interpretation, and law enforcement services in this zone.

### **5.2.2 Utility Zone**

This zone is dedicated to providing visitors with limited recreational opportunities as well as nature interpretation services to raise conservation awareness. Hotels and camping areas, religious sites, fire lines (roads) for jungle drives, vehicular patrolling and elephant ride routes, nature walk routes, and public work installation areas are all included.

### **5.2.3 Core Zone**

The core zone includes areas of wilderness, including the fragile Churia ridge and slopes on both sides, north and south. The primary goal of this zone is to protect and preserve the natural state of the ecosystems, to provide suitable habitat for wildlife, to ensure the stability of the Churia ridge, and to encourage research and science-based management intervention.

### **5.2.4 Buffer Zone**

Buffer zone is multiple landuse area outside Park boundary and includes settlements and private lands, where conservation friendly development activities are carried out. As guided by Buffer Zone Regulation 2052, several BZ development activities are implemented to reduce people's reliance of forest resources from core area and improve the livelihood of local people living in the area using 30-50% of the revenue generated by the Park as per the provision of NPWC Act, 2029 (25 - ka). Since the BZ also falls under the jurisdiction of various municipalities of Bara, Parsa and Makawanpur, these municipalities also invest substantial financial resources for development activities. A total of 46 BZCF manage the forest areas in the buffer zone.

## **5.3 Theme Plans**

### **5.3.1 Park Protection**

#### **5.3.1.1 Status**

As per the provision in NPWC Act 2029, Nepal Army has been deployed for the protection of the Park. Overall protection of the Park is done by a battalion and a company of NA led by a Lieutenant Colonel and reports to the National Parks and Wildlife Conservation Directorate at NA headquarters based in Kathmandu. A battalion with its headquarters at Adhavar was deployed only in 2016 to cover a larger portion of the Park. Previously, protection activities were carried out through a company (Gulma) led by Major. To effectively patrol the park, there are 3 subsidiaries established in Nirmal Basti, Bhata, and Sahajnath. One company is in charge of protecting the Makwanpur area of CNP. Altogether, there are 16 security posts strategically

placed to guard and secure the core and BZ (Figure 11 and Annex XI). Elephants are kept in 3 locations and have been an important mode of transportation as they maneuver well across all terrains and habitats, rivers, wetlands and tall grasslands. Most of the security posts are jointly hosted by both Park staff and security personnel. The security posts assist Park staff with routine patrolling, controlling entry and exit points, conducting search operations, and other law enforcement activities. Patrolling is done on foot, bicycle, motorcycle, vehicle, or elephant, depending on the situation and location. Apart from this, the Park staff also deliver technical as well as administrative tasks in the BZ. The CCO is in charge of coordinating with the battalion commander to ensure effective law enforcement.

In addition to regular patrolling efforts, sweeping operation, long range patrol, camping operation are also carried out in sensitive areas. Special protection strategy is adopted using elephant patrolling, CCTV and spy cameras during rainy season when most parts of the park are inaccessible for regular patrolling by vehicle. In addition to this, real time SMART patrolling has been under implementation which has been found to be a very effective means for Park protection. NA is constantly working in the innovative technology for Park patrolling. Night patrolling, also called as ambush patrol, at most of the places is also in practice to ward off poaching activity. Other activities targeted to ensure protection include footpath surveillance, salt lick waterhole, encroachment monitoring, and checking of potential electrocution sites.

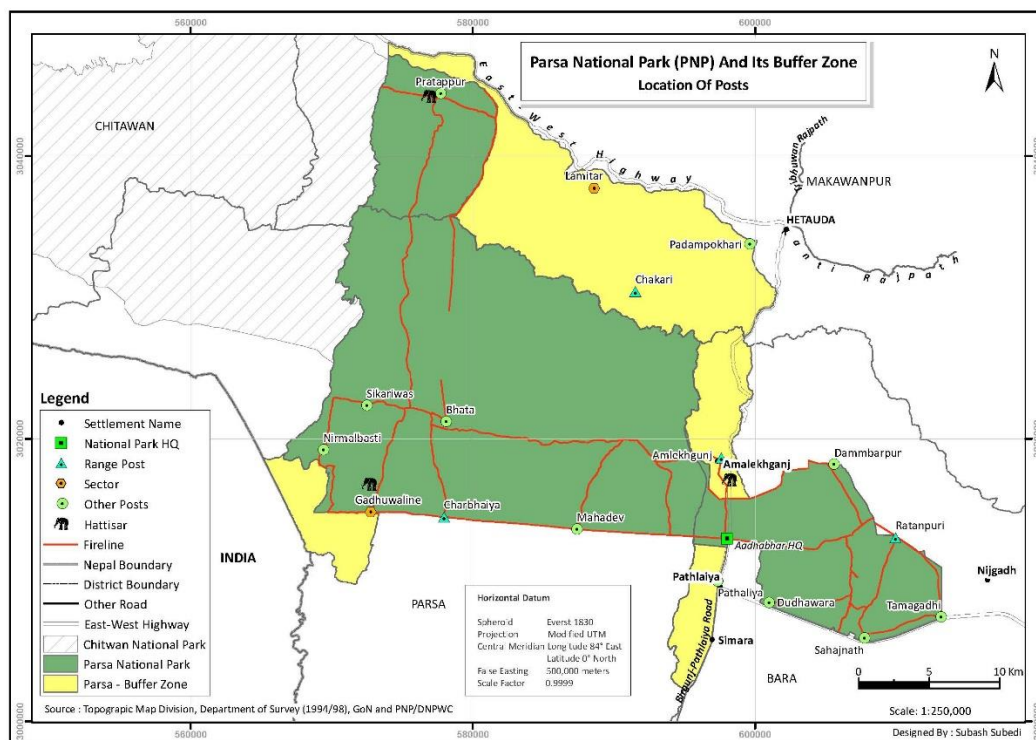


Figure 11: Location of posts

Operation Maha Hunt is launched during poacher's surge period (winter season until the onset of peak monsoon) by deploying additional numbers of armed-force. This special operation has been very effective in curbing poaching and other illegal activities in and around the Park.

#### **5.3.1.2 Issues**

- Porous southern boundary along Adhavar-Gaduwaline from where timber smuggler and poachers enter;
- Free public movement using traditional rights of ways from Gaduwaline-Bhata-Pratapur fireline inside the core area which is often used by smugglers;
- Much of the time have to be spent in the regulation and resolving issues in the management of Sand, Gravel and Stone in the BZ with BZ community, crusher industry and community development work of municipalities;
- Disturbance and risk of poaching during Dugdeshwor Mela which takes place three times a year.;
- Inadequate security posts along the northern boundary;
- Vehicle patrolling not possible during the rainy season due to lack of all-weather roads ;
- Poor network coverage in most of the core areas;
- Lack basic amenities of safe drinking water and electrification in guard posts;
- Inadequate facilities to store seized wildlife body parts before transporting to CNP for stock piling;
- Inadequate vehicles for extensive patrolling; and
- Inadequate resources for regular repair and maintenance of existing physical infrastructure and equipment;
- Any issue of staffing, issue of their health and safety, and motivation packages, while working in difficult terrain and seasons;

#### **5.3.1.3 Strategies**

- Establish adequate posts at strategic locations to fill the gap areas avoiding sensitive areas;
- Develop check point system in Pathlaiya and Churiamai;
- Develop fireline on the foothills of Chure for patrolling and improvement of water facility;
- Bring adjacent collaborative forest under protected area system either in the form of core area or BZ;
- Enhance patrolling through foot trail, bicycle, elephant, vehicle from posts on a regular basis to minimize illegal activities;
- Explore and use innovative and advance technology to monitor sensitive areas during high risk periods;
- Establish information collection and purchase mechanisms with local informants;

- Coordinate with infrastructure development agencies to follow Wildlife Friendly Infrastructure Guideline to promote wildlife friendly infrastructures;
- Electrification of the guard posts coordinating with district electricity authority;
- Establish and strengthen communication facilities;
- Share information and extend cooperation with CNP and VTR authority to control poaching; and
- Establish and strengthen information sharing and reporting mechanisms with key stakeholders including CIB, CNP, VTR India, and Divisional Forest Offices and local communities;
- Strengthen community based anti-poaching and information gathering mechanisms; and
- Manage funds for urgent rescue by helicopter charter to Park and Army staff stationed in remote areas in case of emergency.

#### **5.3.1.4 Activities**

- Construct 2 additional quarters for staffs in Aadhavar;
- Construction of 8 additional joint posts (Ratmate, Jamunia, Churiamai, Ghodemasan, Halkhoriya, Parkibas, Dillipur and Sitalpur) for PNP staffs;
- Construct 1 snake bite medical service centre in Nirmalbasti;
- Renovate 10 office buildings and posts;
- Repair and maintenance of office buildings in HQ, Sector office, Range post, Guard post and security posts including fencing;
- Construct and upgrade facilities such as drinking water, solar power for lighting and charging batteries of communication and mobile phone at sector offices, guard posts and security posts;
- Maintain kitchen, toilet and fence of posts and sector office regularly;
- Procure water filter to provide clean and safe drinking water to staff stationed at posts;
- Construct 2 checkpoint units at Pathlaiya and Churiamai;
- Support Department of Road (DoR) to construct 11 Km overhead bridges (Amlekhgunj to Pathlaiya-6 Km, Nirmalbasti to Brahma nagar-1 Km, Pathlaiya to Tamagadi-3 Km, Shajnath to Tamagadi-1 Km) in elephant corridor;
- Support DoR to conduct feasibility study to construct wildlife friendly crossings along the highway passing through core area following WFICD guideline;
- Upgrade existing 240 (212 existing, improvement 28 of Bhata-Shitalpur-Pratapur) Km fire line to all-weather road networks inside the Park;
- Construct 50 Km track road on the foothill of Chure range;
- Maintenance of 125 km of fire line throughout the year;
- Construct 5 RCC Ambush towers in sensitive from security point of view and use them during night camps;
- Repair and maintain existing 22 watch towers;

- Construct 15 wooden bridges with RCC or cement mortar foundation;
- Repair and maintain of 15 existing wooden bridges;
- Construct 5 RCC causeways;
- Support district electricity authority to electrify Mahadev posts, Bhata, Shkaribas and Dudhaura;
- Undertake meeting with mobile companies and install 3 Base Transceiver Station (BTS) inside the Park;
- Install walky-talky radio communication throughout the Park including repair and maintenance;
- Install additional 25 CCTV cameras in the highway from Amlekhgunj to Pathlaiya and Pathlaiya to Tamagadhi;
- Install 25 spy camera (poacher's cam) at strategic location;
- Repair and maintain CCTV and Spy camera on yearly basis;
- Undertake patrolling (short, medium and long range), camping and sweeping operation by a joint team from headquarters and sector;
- Implement real time and SMART patrolling with changing the time and route on random basis;
- Conduct long-term surveillance of suspected area and persons;
- Implement information purchasing mechanism through informants;
- Institutionalize district level WCCB formed at three districts, viz. Parsa, Bara and Makwanpur;
- Undertake meetings and exchange visit, information sharing mechanism to strengthen trans-boundary cooperation and coordination with VTR, India;
- Procure metal detector to identify iron set leg traps probably used by poachers to trap wildlife (especially for tiger);
- Procure 4 long hour flying drone to monitor sensitive areas;
- Procure 4 thermal cameras that can take picture in the night;
- Procure 50 cycles;
- Procure 15 motorbikes;
- Demarcate PNP and Settlement area;
- Procure 4 four-wheel vehicles for both Park and Security Unit for Ratanpuri area and monitoring of problem wildlife;
- Procure 20 night vision binoculars; and
- Undertake auction to dispose old, unworkable and rusty vehicles, motorbikes and cycles through the legal process.

### 5.3.2 Habitat Management

#### 5.3.2.1 Grassland Management

##### 5.3.2.1.1 Context

Canopy opening and cutting of trees has been one of the regular practices to create and manage grasslands in PNP. Canopy opening along firelines has also been done to facilitate growing grasses in dry Bhawar areas. New grasslands are also created in the old settlement areas of Rambhori, Bhata, Ramauli, and Pratappur evacuated in 2009/2010. Similarly, new grasslands have also been developed close to the post and at strategic location nearby fireline. Altogether, 22 major patches of grasslands are located in the various locations of the Park, which provides crucial habitat for Asian Wild elephant, Tiger, Gaur, One-horned rhinoceros and prey base species. Other important grasslands are Adhavar, Gadhuwaline, Kamini daha, Charbhaiya, Hatti pokhari, Jamunia khola, Sahajnath, Sukepokhari and Pasaha,

In the two-years of 2077 BS and 2078 BS alone, 5 open grasslands with a total area of 300 ha. have been developed at Sukepokhari, Kali daha, Ratmate, Mahadev, Kamini daha to provide grasslands for prey base species as the tiger number has increased sharply in PNP. In this process, many trees have been cut and this has to be managed by stacking them in one side followed by control burning so that new sprouts will come out. The stacked timber can be used for internal purposes like construction of posts, wooden bridge and watch tower. The rest of the timber will have to be inventoried and send the available timber volume to DNPWC for further action. This timber can also be provided to the victim of disaster by endorsing from disaster management committee of district under District Administration Office.

Siru (*Imperata cylindrica*), Munj (*Saccharum bengalense*), Kans (*Saccharum spontaneum*), Dhaddhi (*Cymbopogon species*), Dubo (*Cyanodon dactylon*), Kush (*Demostachya bipinnata*), Bansa (*Eragrostis tenalle*), Bans (*Dendrocalamus strictus*) and *Cyperus amabilis* are the major grass species found in this Park.

##### 5.3.2.1.2 Issues

- Inadequate grasslands and existing grasslands are small in areas;
- Degraded grasslands due to invasion of weeds and woody vegetation;
- Degraded habitat in the foot hills of Chure.;
- Grasslands in the collaborative forest managed by DFO are degraded due to uncontrolled grazing, forest fires and timber smuggling;
- Forest corridor in Syaulibasti, CNP-PNP-VTR complex, suffers from unsustainable harvesting of forest produce as well as collection of floodplain materials, poaching, overgrazing and encroachments;
- Public procurement process (bidding) hinders timely management of grassland regime;
- Site- and species-specific habitat management regime is not initiated; and
- Poor science-based inputs in grassland management.

#### **5.3.2.1.3 Strategy**

- Recovering and expansion of grassland on both sides of fire lines and streams by opening up of canopy and removing woody vegetation at regular interval;
- Enhancing understanding and knowledge of grassland management using geo-information science through collaboration with research and academic institutions;
- Allow Khar-khadai to local people to cut, collect and bring thatch grasses for domestic use once a year to manage grassland;
- Control Invasive Alien Species (IAS); and
- Collaborate with researchers and academicians to carry out studies and research.

#### **5.3.2.1.4 Activities**

- Undertake spatial mapping and update information of grasslands;
- Undertake mapping of AIS and woody perennial species;
- Recover 500 hectares of new grasslands by removing woody species;
- Cut trees to open up sixty percent canopy to facilitate growth of grass species in 500 ha. especially in the dry Sal forest;
- Uprooting and burning invasive species in at least 500 hectares from the critical habitats;
- Manage 700 hectare of existing grasslands by manual cutting of seedlings, sapling and trees, uprooting and/or controlled burning;
- Clean at least 30 m shrub and trees, to promote grassland, along both sides of forest road/fire line for 150 km to maintain visibility of wildlife;
- Maintain and repair mechanical grass cutting equipment;
- Allow local people for grass cutting for (Kharkhadai) 3 with strict monitoring and supervision; and
- Pilot at least one grassland by ploughing and cultivating cash crops, planting bamboos and if possible, plant a wild banana for Wild elephants.

### **5.3.2.2 Wetland Management**

#### **5.3.2.2.1 Context**

Water is scarce on the southern part of Siwalik. During the dry season, water scarcity is a major limiting factor for wildlife in the Park, particularly near the Aadhavar, Mahadev Khola, and Charbhaiya, and Jamunia posts, Kamini daha, Ratmate and Sukepokhari. As a result, wild animals are forced to leave the Park, making them vulnerable to poaching. However, after the restoration of Halkhoriya Lake, the lake provides water for wildlife throughout the years and a number of wildlife species including Asian Wild elephants, tigers, rhinoceros, gaur, deer, wild boar and other small mammals are frequently seen in and around this lake. The Park prioritizes the creation of new water holes in water-scarce areas, as well as the upkeep of existing water holes. A water hole near Aadhavar grassland and Kamini Daha north of Adharbhar require regular maintenance to hold enough water throughout the year. A number small water holes

previously used by local residents for fishing exist in the old Rambhori and Bhata settlement areas and provide water throughout the year. Currently, water holes are deemed necessary near Mahadev Khola, Jamunia Khola, and other locations.

#### **5.3.2.2.2 Issues**

- Low waterholding capacity due high percolating properties of Bhawar region;
- The wetlands dry up in the summer season;
- Filling of water in cemented water holes also requires substantial amount of resources.;
- Forest encroachment of park area adjacent to northern Syaulibasti of Nirmalbasti village;
- IAPS invasion in forest and grassland areas by *Eupatorium odoratum* and *Mikania micrantha*, and water wetlands by Water Hyacinth.

#### **5.3.2.2.3 Strategies**

- Enhancement of knowledge on wetland ecosystems in collaboration with academic institutions;
- Documentation of current status of wetland and outcomes of management interventions;
- Restoration and rehabilitation and development of wetlands in all the parts of core area focusing dry areas by feeding water from streams in the monsoon season and blocking flow of rivulets and constructing dam;
- Develop water holes adjacent to forest road or fireline;
- Protection and conservation of riverine forest which are most important for mega herbivores as well as carnivores where food, water and shelter are adequately available;
- Strengthening stakeholders' capacity in wetland management; and
- Promote conservation and sustainable use of wetlands for maintaining the functional environment;

#### **5.3.2.2.4 Activities**

- Undertake inventory and spatial mapping of wetlands and water holes;
- Construct 12 intakes in the upstream of Churia in the northern side of the Park by constructing RCC or Cement Mortar dam to provide water for animals during dry seasons;
- Construct 5 large water recharge ponds below the intake at the foot-hills of Churia;
- Construct additional 25 plain cement concrete ponds near the forest road/fire lines to hold water for the dry period;
- Pilot 5 solar water pump to supply water in the water holes;
- Clean and remove weeds in wetlands and maintain cemented water holes by and supply water by water tanker on regular basis;
- Clean and remove weeds in Kamini daha, Kali daha, Lauki daha and Halkhoriya and renovate annually to prevent from further degradation;
- Repair and maintenance of dyke below rambhori to store water for wildlife;

- Repair and maintain tank in Mahadev khola and construct additional one;
- Conduct water quality monitoring of rivers, lakes and water holes at regular interval;
- Procure high density water tanks to store water for dry seasons;
- Repair and maintenance of existing water tank vehicle; and
- Celebrate world Wetland Day on February 02.

### **5.3.3 Forest Fire Control**

#### **5.3.3.1 Status**

PNP has an extremely dry environment and is prone to forest fires causing incalculable damage every year during the late winter or dry season. Forest fires endanger the Park's wildlife, particularly reptiles, young mammals, and birds. Most of the fires are set or lit by timber smugglers, poachers, and NTFP collectors, or by locals who carelessly throw burning match sticks, bidi, or cigarette. Local people also set fire to have new sprout of grasses for their livestock. However, taking fire-producing items inside the Park is strictly prohibited

A 212-kilometer fire line network has been established in the Park to avoid the risk of fire spread from one block to the next (Figure 12). Before the commencement of dry season, the fire lines are cleaned on a regular basis. Controlled burning is practiced as a management tool to prevent hazardous forest fires and to manage grasslands. Every Guard post requires a team of human resource comprising both Park and security personnel who are trained in fire management and have access to firefighting equipment.

#### **5.3.3.2 Issues**

- Summer grass, fallen leaves and branches in dry season becomes so igneous that fire spreads very quickly;
- Inadequate fire lines to allow safe scape of wildlife during forest fire;
- Increased loss of critical forest habitats due to increasing fire size and severity;
- Absence of a fire-fighting strategy;
- Poor understanding of fire hazards and its impact on species and ecosystem; and
- Narrow fire lines to limit surface fire.

#### **5.3.3.3 Strategies**

- Promotion of control burning before the second week of March to avoid forest fire;
- Adoption of fire prevention by identifying fire prone areas using web-based fire mapper;
- Development of a fire management action plan/ strategy for PNP;
- Establishment rapid response team by involving local people, Park staff and security personnel for fire fighting in Park headquarter, sector office and other fire prone areas;
- Develop capacity of Park staffs, security personnel, Buffer Zone Community Forest (BZCF) members and BZ communities in forest fire control; and
- Maintenance and expansion of fire control equipment;

- Develop and maintain fire line; and
- Increase awareness towards BZ communities about prevention of fire incidents;

#### 5.3.3.4 Activities

- Identify and map fire prone areas;
- Prepare and implement fire management action plan;
- Clear fire line or undertake control burning in the fire lines before the onset of fire season;
- Capacity building of Park staff and security personnel, and BZCF members;
- Procure fire-fighting equipment Mobilize rapid action squad for firefighting;
- Mobilize rapid action squad for firefighting;
- Carry out fire prevention education and awareness activities through interaction;
- Mobilize fire-fighting team with equipment in order to stop spreading of fire in grasslands;
- Prepare database of fire prone areas and frequent fire occurring areas;
- Carry out fire prevention education and awareness activities; and
- Construct a 30 Km fire line.

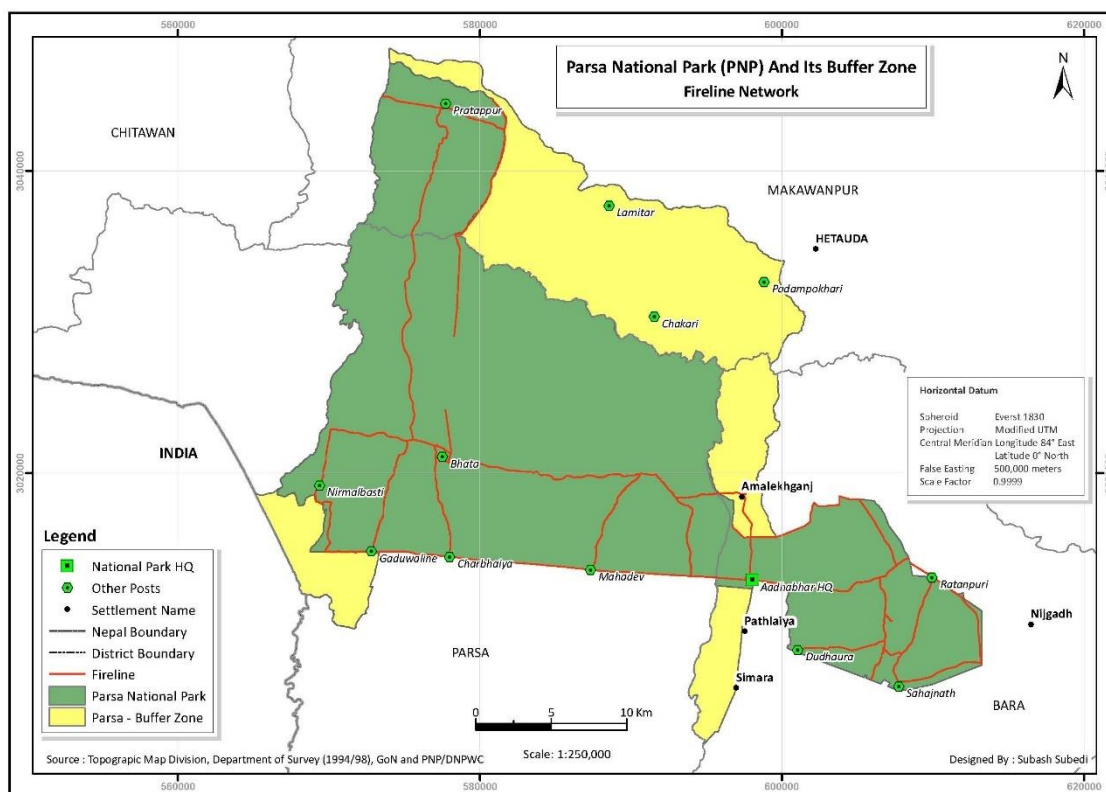


Figure 12: Fire line in the PNP

### **5.3.4 Wildlife Health Services**

#### **5.3.4.1 Status**

Wildlife and livestock interact frequently, either directly or by sharing the same grazing space or waterholes. Because there is a risk of disease transmission from livestock to wildlife and vice versa, health monitoring and surveillance on a regular basis is imperative. Furthermore, to prevent disease outbreaks, livestock in the buffer zone areas must be immunized on a regular and timely basis against major diseases such as anthrax, rinderpest and foot and mouth disease.

Many wildlife species are killed or injured as a result of road accidents on the east-west highway. In many cases, livestock have also been reported to be injured by wild predators. Veterinary doctor is recruited in the Park recently and establishment of wildlife health unit, to provide effective medical services, is underway. The Park also offers a service to care for orphaned animals until they are well enough to be released. During the last five years, 32 wild animals have been rescued and the majority of them have been released in the Park. The Park currently has only one orphanage or rescue centre where at least two small animals or predator species, such as tigers or leopards, can be kept. In PNP, there is no adequate space for more than two orphanage animal or problem predator species.

#### **5.3.4.2 Issues**

- Lack of wildlife health management strategy and action plan and facilities to treat them;
- Increased injury to the wildlife due to road accidents and retaliation;
- Poor medical services in the absence of well-equipped wildlife health care center;
- Risk of transmission of zoonotic diseases;
- Inadequate financial resources for wildlife health management;
- Inadequate facility for the management of rescued wildlife; and
- Low priority for wildlife health management in the planning process.

#### **5.3.4.3 Strategies**

- Provision for wildlife health management policy and protocols for wildlife health monitoring and surveillance;
- Upgrade orphanage care and wildlife rescue centre;
- Coordination with district Veterinary Hospital and Livestock Service Center to encourage stall-feeding, replacing unproductive livestock and vaccination against foot and mouth disease in BZ;
- Developing skill to handling sick and injured wildlife; and
- Surveillance of zoonotic diseases in and around the Park.

#### **5.3.4.4 Activities**

- Develop wildlife health management plan for PNP

- Construct 2 wildlife orphanage and rescue facility in both the sectors to accommodate more problem animals;
- Construct a large open enclosure with multiple partition for keeping additional problem tigers or leopards in Parsa Zoologica garden;
- Construct wildlife health centre to provide veterinary services;
- Procure equipment (including medical equipment, 2 deep fridge and 2 tool kit box) to wildlife health centre in Aadhar;
- Procure 1 wildlife rescue vehicle;
- Carry out regular checkup for captive elephants including vaccinate, deworm, routine foot care, trimming and addressing any foot-related issues, and treat them;
- Coordinate Veterinary Hospital and Livestock Service Expert Centre and conservation partner to provide vaccine to livestock against potential diseases that can be transferred to wildlife;
- Undertake postmortem of all the deceased wild animal;
- Provide food for injured or orphaned wildlife; and
- Provide support to look after wildlife orphanages and rescue facilities.

### **5.3.5 Encroachment Control**

#### **5.3.5.1 Status**

Encroachment in national parks poses threat to the conservation of biodiversity. As per section 5 (Ga) of NPWC Act 2029, an individual can be penalized for encroachment of Park and BZ who are found to be involved in building house and cultivate agriculture. There is encroachment of Park Syauli basti, Bhiman and Jyamiyebasti. Out of them, the encroachment in Syauli basti area of Nirmal basti is a major problem since it is an important area of PNP-CNP-VTR complex as wildlife use it as corridor for their movement. Local people use girdling to the trees nearby their farmland to remove standing trees. When the trees die, they gradually convert the area into agricultural land and build bio-fences out of thorny bushes and thus encroachment expands. The record of encroachment in the Park and BZ is 240 ha and out of them 140 ha. has been recovered. The recovered area includes the Syauli basti which is corridor of PNP-CNP-VTR complex, and it was recovered in 2077 BS. Currently, there are wildlife movement after it was demarcated followed by plantation.

Even before the establishment of reserve, encroachment of national forest took place in the east-west highway near Pathlaiya east-west in name of providing service to passengers. People used to construct small hut which later converted into RCC house. Similar cases of encroachment occurred in the BZ forest of Amlekhgunj and Manahari in the similar way. The cases of Pathlaiya and Amlekhgunj has been somewhat resolved by the GoN. The land registration certificate is yet to be handed over. The encroachment of Bhiman and Manahari is yet to be resolved. It is important to address encroachment and requires a multi-faceted approach that combines legal measures, community empowerment, and sustainable development strategies.

#### **5.3.5.2 Issues**

- Fragmentation of wildlife habitats including corridors due to encroachment;
- Involvement of encroachers in poaching directly or support poachers by furnishing information about animal living nearby encroached areas;
- Risk of expansion of encroachment area as the population in illegal settlement increases; and
- Development of permanent infrastructures in encroached area affecting the biodiversity and its landscape.

#### **5.3.5.3 Strategies**

- Halting encroachment of Park and BZ forest by immediate response in evacuation and restore evacuated areas;
- Relocate inhabitants of Bhiman from core area to public land;
- Collaboration with District Administration Office (DAO), NA, BZ communities, Local and Provincial Governments, Political Parties, local NGOs, conservation partners to evacuate encroachment as per current government policy to control encroachment in more coordinated and effective manner;
- Formulation of information and communication strategy to aware the local people about consequences of encroachment; and
- Engagement of Ministry of Forests and Environment (MoFE) to see appropriate solutions.

#### **5.3.5.4 Activities**

- Update encroachment records in both Park and BZ;
- Issue notice to evacuate the encroached area on a regular basis;
- Relocate settlement from encroached area to outside of the PA to discourage fragmentation and increase grassland habitat; and
- Conduct district level meetings to resolve encroachment problems.

### **5.3.6 Human Wildlife Conflict**

#### **5.3.6.1 Status**

Wild elephants, tigers, leopard Wild boars and monkeys are the main wildlife that causes conflict between humans and wildlife. Other wildlife such as deer, bear, jackal, snake and python also pose problem either by damaging crops or injury to humans and livestock. The number of HWC seems to be gradually increasing compared to previous years.

These wild animals move out of the Park into the BZ in search of food and water. In due course, the wildlife forage crops and damage their houses. In case of Wild elephants, they move from

one forest to other through their age-old migratory route. There is settlement in between the forest fragmenting corridor. During their movement there will be crop loss, damage to houses, casualty to human can occur. Inadequate knowledge of animal behavior while chasing them can lead to death of human as well. Chasing Wild elephants from close proximity after getting drunk has also caused death of human. Similarly, due to the poor management of livestock shelter and food storage tigers and leopard and jackal attack the goats and poultry. While saving their livestock, people often get injured from the fight with wildlife. When the humans are killed by tiger on a repeated, they are identified and capture and kept in cage.

The no. of cases of human and wildlife conflict increased from 16 in FY 2074/75 to 167 in FY 2078/79. Similarly, in the five years period, there are more cases of livestock casualty (243), followed by agriculture crop loss (145), damage to food storage (54), house damage (40). There are record of 12 human deaths in the five-year period and most of the deaths are caused by Wild elephants. There were 5 deaths of human due to the wildlife in FY 2078/79 alone. When we look at it from the wildlife side, the conflict from Wild elephant (252) is much higher than others followed by leopard (151) and tiger (73). The sudden increase of human and Wild elephant conflict appeared from the emergence of new Wild elephant called as Yam Gaj who is roaming in and around the Park as well as BZ. Similarly, there is report of tiger attack in Thori area and tiger is captured and kept in the rescue centre of Aadhavar.

#### **5.3.6.2 Issues**

- Shortage of water in the Park that drives the wildlife to come out of the Park in search of water;
- Grassland is not distributed in all parts of the core area and prey base species often visit the BZ for nutritious crops;
- Increasing crop damage, livestock depredation and property damage by wildlife;
- Illegal Park entry by local communities from the collaborative forest to collect mainly timber and fuelwood;
- Poor knowledge among locals on wildlife behavior;
- Poorly managed livestock shelter or goth;
- Existing large linear infrastructure passing through park is not wildlife friendly

#### **5.3.6.3 Strategies**

- Mobilize RRT, wildlife rescue team, BZ communities immediately to respond the incident with all required equipment upon getting information;
- Providing immediate support to cover medical expenses;
- Expedite relief delivery process to the victim of family;
- Providing support to the family of the victim with long term welfare package
- Increasing awareness of local community towards the animal behavior and taking precaution in deterring wildlife;

- Developing strong physical fence to ward off Wild elephant to enter into the settlements;
- Initiate early warning system for the wildlife entering into the village;
- Strict implementation of provisions in wildlife friendly infrastructure guideline while developing large linear infrastructure in areas frequently used by wild animals;
- Initiation of most effective insurance mechanism to the property and crop damage;
- Promotion of alternative crops that are not preferred by wildlife;
- Regular tracking of wildlife movement in the peripheral areas and sharing information with local communities;

#### **5.3.6.4 Activities**

- Implement conservation awareness activities to minimize HWC
- Conduct research and studies to bring out innovative technologies to reduce HWC
- Provide support to construct improved animal shelter;
- Introduce high value crops that are not favored by wildlife;
- Distribute wildlife deterring lights to BZCFs;
- Provide support to establish smart light at sensitive areas;
- Erect 20 Km solar fence to prevent elephant strayed in the settlement especially in those areas where conflict is severe thereby reducing human-wild elephant conflict;
- Construct 25 Km of mesh jali to stop wildlife entering into the settlements and farm land;
- Maintenance and repair of 30 Km of solar fence and Mesh Jali fence forming repair and maintenance committee; and
- Carry out piloting of early warning system for Wild elephant straying nearby settlements.

### **5.3.7 Management of Elephant Care Facility**

#### **5.3.7.1 Status**

The domesticated elephants in the park are managed according to Captive Elephant Management Policy 2060. The ECF is also responsible for breeding and care of calves. Park elephants are used for patrolling, monitoring and jungle safari for visitors.

#### **5.3.7.2 Issues**

- Very few numbers of captive elephants in the Park;
- Inadequate infrastructure such as shade house, storage room and residence for elephant care takers;
- Elephant management is poorly understood by park staff;
- Lack of medical check ups and inadequate health facilities for the elephant; and
- Low morale of elephant care takers due to inadequate facilities.

#### **5.3.7.3 Strategy**

- Prioritize the welfare of elephants by recognizing their behavior, social needs, and physiological requirements;
- Regular health monitoring, including routine check-ups, vaccinations, and disease prevention measures;
- Involve qualified and experienced veterinarians to provide expert care, diagnosis, and treatment of medical conditions and injuries.;
- Maintain clean and hygienic in the shade house including regular cleaning of living areas and removal of waste;
- Provision of appropriate and balanced diets based on the specific nutritional needs of each elephant, including a variety of vegetation, supplements, and adequate hydration;
- Ensure access to clean water, shade, and shelter from extreme weather conditions;
- Incorporate environmental enrichment activities, such as bathing opportunities, foraging and socialization opportunities to stimulate elephants mentally and physically;
- Utilizing positive reinforcement training methods to develop cooperative relationships between elephants and their caretakers;
- Educational programs and outreach initiatives to raise awareness about elephant conservation;
- Engage visitors, local communities, and stakeholders to promote understanding and support for responsible elephant management practices; and
- Maintain detailed records of each elephant's health, diet, behavior, and veterinary care.

#### **5.3.7.4 Activities**

- Construct 1 shade house in proposed ECF at Halkhoriya;
- Construct 1 residence for the elephant care takers;
- Construct 1 store-room to keep the elephant food material and equipment;
- Repair and maintenance of 6 shade houses in Amlekhgunj (3 unit) and Pratapur (2 unit) and Gaduwaline (1 unit);
- Provide equipment such as hauddha, gaddi, and other materials for elephant safari on yearly basis;
- Procure food materials for all the elephants as per the required quota for each elephant;
- Procure Foot bath for captive elephants;
- Procure Water trough for captive elephants;
- Train baby elephants on a regular basis.

## **Chapter VI**

### **6. Research, Monitoring and Capacity Building**

#### **6.1 Research Priorities**

Research, monitoring and capacity building play a complementary role in the conservation of PAs. The role of research is to solve problems concerning effective conservation and to answer questions arising in the course of the management. In contrast, monitoring permits assessment of whether a PA achieved its conservation goals under current management and to assess the success or failure of a particular management plan. Research in protected areas can be divided into two groups according to its goals. The first group comprises research that is carried out to support management and to solve conservation issues. The second group covers research that simply aims at a better understanding of natural and human-mediated processes, without necessarily having any applied conservation goals.

Although, PNP offers a lot of areas of study from species to ecosystem and to the landscape level, research activities are quite limited. Many endangered species' population status is poorly understood. Thus, there is a need to set research priorities for PNP and its BZ. The key steps to strengthen research and monitoring in PNP are as follows:

- Identification of gaps and areas for short and long-term research in the park.
- Formulation of research plan for the park with the support of DNPWC.
- Collaboration with academic institutions and organizations for periodic researches.

The specific research priorities based on the present context and available information are as follows:

##### **6.1.1 Habitat Management**

- Study on vegetation dynamics and its impact on wildlife habitat;
- Undertake study to identify suitable mechanical grass cutting machine;
- Conduct study towards impact of habitat fragmentation and degradation on wildlife populations;
- Study grassland management practices and its impact on conservation with special focus on requirement of ungulates;
- Conduct research in a regular basis to understand grasslands dynamics;
- Impact of IAS in wildlife and its habitat and experimental research to control it;
- Carry out study of corridors and connectivity upto Bagmati river of Rautahat;
- Study land cover change using geo information and earth observation science; and
- Conduct research on facilitating water and land use planning and management.

### **6.1.2 Species Conservation**

- Update digital database maps using latest topo sheets, satellite imageries and aerial photographs for updating Wild elephant, tiger, rhinoceros, Gaur bison, Wild dog and Four horn antelope;
- Study of distribution and abundance of various prey base species;
- Conduct study on movement and ranging behavior of Wild elephant with special focus on human-wildlife conflict;
- Carry out study of seasonal migration of wildlife using GIS and Remote Sensing (Tiger, Rhino, Wild elephant etc.);
- Study the status of human-wildlife conflict mainly with tigers and Wild elephant;
- Undertake intensive research on trans boundary movement of Wild elephants and tigers and the use of corridors, BZ areas and human settlement through satellite radio telemetry;
- Conduct studies on the scale, extent and local variations in the intensity of human-tiger conflict to help to identify and design effective mitigation measures;
- Study ecological processes that affect in maintaining healthy wildlife population;
- Undertake research and development works towards management of wildlife health;
- Identify indicator species to assess habitat condition;
- Status and behavior of sloth bear;
- Status of small carnivores; including wild dog, otter, fishing cat, jungle cat, leopard cat and civets;
- Carry out study on spatial distribution and abundance of four horned antelope;
- Undertake study of Gaur about distribution, population dynamics, preferred grass and its behavior;
- Study Gaur's behavior ecology using cutting-edge technology (satellite/radio-collaring, camera trapping, and genetic analysis. Etc.).
- Identify critical pangolin habitat and map the priority sites;
- Study least studied small mammal (mouse, rat, shrew, bat; etc.), herpeto-fauna (python and golden monitor lizard), butterfly, insects and fish; and
- Study pattern and trend of bird migration including migratory birds both general and species-wise.

### **6.1.3 Tourism management**

- Perception of visitors about the tourism facilities and services from hotels and Park authorities;
- Study to identify potential tourism products and their packaging;
- Aspiration of hotel operators regarding services and cooperation from the Park;
- Conduct study to identify potential site to promote homestay; and
- Undertake marketing strategy to attract visitors in the Park and BZ.

#### **6.1.4 Climate Change**

- Study climate change impact on Gaur and its habitat
- Conduct study of climate change indicators and impact on biodiversity conservation along with identification of adaptation activities; and
- Climate change impacts and indicators on biodiversity conservation along with adaptation strategies.

#### **6.1.5 BZ**

- Undertake assessment of socio-economic condition of local people in the areas where human-wildlife conflict is high;
- Undertake study to mitigate and minimize HWC;
- Impact of BZ programme on conservation and sustainable livelihoods of local communities;
- Carry out study to bring Ratanpuri settlements to BZ system;
- Conduct study to assess the optimum quantity of sand, gravel and boulder that can be extracted each year;
- Study to relocate human settlements of Shikaribas and Bhiman;.and
- Undertake study on effectiveness of buffer zone program in the buffer zone – social, environmental and economical.

#### **6.1.6 Institutional Strengthening**

- Carry out study to include the collaborative forest of southern part of the Park in the Protected Area system;
- Undertake study to find out ways to place underground optical fibre cable from East-West highway with minimum impacts occurring during the layout and maintenance periods;
- Undertake study to lay out additional pipe line of NOC through PNP;
- Prepare bibliography of the literatures for which studies were conducted in PNP,
- Undertake evaluation of management plan in the fourth year of implementation,
- Conduct management effectiveness of PNP.
- Undertake Mid-term review of the management plan;
- Prepare next five-year management plan (2023-2027) including IEE;

### **6.2 Monitoring**

Monitoring wildlife and its habitat on a regular basis is very important for the management of any PA. It generates time series data, allowing us to see trends in population size, male and female population ratios, distribution, and habitat condition. The result from periodic monitoring gives the idea on the trend of wildlife population and change in habitat condition over time. As monitoring provides information on ecological changes based on vital signs, it is beneficial for

Park managers especially in early warning and early control. Joint monitoring is carried out inside the Park to curb poaching activities during short, medium and long range patrol. The patrolling team records events of wildlife sighting, poaching, illegal wood cutting as well as any other changes in the forest. CCO and corresponding battalion commander visit Park security and posts separately or jointly for periodic monitoring.

The following key areas and framework for monitoring of wildlife conservation are proposed:

#### **6.2.1 Species Monitoring**

- Regular monitoring of Wild elephants in PNP based on direct sightings and indirect signs;
- Monitor problem Wild elephant using CC camera, satellite radio collars in a real time basis;
- Monitor tiger on a regular basis based on foot-print, scratch and scats;
- Undertake problem tiger monitoring using radio collar, camera trap and deploying special team;
- Monitor problem tiger using satellite radio collars in a real time basis;
- Monitor prey base species on regular interval;
- Monitoring of four horned antelope on periodic basis based on direct count;
- Monitoring of small mammals;
- Monitoring of winter migratory water birds; and
- Monitoring of globally threatened and nationally protected birds.

#### **6.2.2 Habitat Monitoring**

- Undertake habitat monitoring, prepare check list of food plants, document physical and phenological changes in vegetation, quantity and quality of discharges in streams and biotic disturbance;
- Undertake monitoring of permanent plots, transect lines in forests, grasslands and other habitats;
- Periodic wetlands and water holes monitoring;
- Monitor extraction of soil, sand and gravel in coordination with local authority.

#### **6.2.3 Wildlife health monitoring**

- Undertake regular health check-up of captive elephants including their foot;
- Carry out dung test of captive elephants on a regular basis to assess their health condition; and
- Monitor key-stone and flagship species on a random basis.

#### **6.2.4 Fire monitoring**

- Monitor spatial and temporal pattern of fire incidence;

- Monitor fire and fuel dynamics.

### **6.2.5 Water Quality Monitoring**

- Monitor of water quality of wetlands, water holes, rivers and streams on a regular basis.

## **6.3 Capacity Building**

Capacity building is a regular business for Park staff. They need to be trained and provided knowledge to deal with the emerging management challenges. Because the Park has a very limited number of experienced staff, particularly in field techniques, various knowledge and skills should be developed and transferred to them through appropriate trainings and outreach activities. Need-based training improves the efficiency of the Park's staff. Thus, training needs assessment should be meticulously done, and a training plan be developed to cater to the needs of the staff. There is a need for both horizontal and vertical participant training. The horizontal type of training involves the participants of equal rank whereas the vertical type of training involves participants of different ranks from chief warden to game scouts and from battalion commander to soldiers. Vertical training is important to maintain a chain of command and to understand field staff of different tiers and share experiences that would help to build mutual trust and relations. Some of the capacity building activities that are considered important to PNP staff are as follows:

### **6.3.1 Frontline Staff and Security Units**

- Orientation training to security units;
- Orientation training to Game Scouts on legal enforcement;
- Basic training on field equipment like GPS, Range Finder, Compass, etc.;
- Train staff to collect blood, faecal, urine samples including preservation of vital organs and specimens;
- Field observation techniques, including signs and tracts of wildlife;
- Orientation training on social mobilization;
- Basic training on vegetation quantification for recording data in monitoring plots;
- Providing training on waste management practices, including waste segregation, recycling procedures, and proper disposal techniques;
- Training on Real-time SMART patrolling;
- Training on wildlife handling, rescue and monitoring; and
- Training on tiger and Wild elephant tracking.

### **6.3.2 For Rangers**

- Social mobilization and participatory planning;
- Effective communication;
- Inventory and resource mapping;
- Training on habitat monitoring;

- Case investigation (crime scene investigation and interrogation);
- Training on anti-poaching operation;
- Training on wildlife handling, rescue and monitoring;
- Training on tiger and Wild elephant tracking;
- Training on animal capture, rescue and release;
- Training on wildlife health condition assessment;
- General and specialized Training of Trainers (ToTs); and
- Database management.

### **6.3.3 For ACO and CCO**

- Human-wildlife amity;
- Appreciative enquiry;
- Human rights training to handle convicted people;
- GIS application for natural resource management focusing on wildlife;
- Training of Trainers (general and specialized);
- Public administration and management training;
- Organization development and management;
- Judicial training;
- Planning, monitoring and evaluation training; and
- CITES implementation training

### **6.3.4 For Park and BZ**

- Forest Fire Management Training to Park staff, security personnel and BZCF members
- Training for CBAPUs mobilization;
- Provide trainings to nature guides to enhance their capacity in nature interpretation specifically on wildlife, birds, plants;
- Training on nature interpretation and display management;
- Conduct refresher trainings to nature guides to update their knowledge and skills in nature interpretation;
- Build capacity of poor and disadvantaged local people in the areas of hospitality, housekeeping, cooking and hygiene to initiate tourism enterprises.

## Chapter VII

### 7. Species Conservation Action Plan

#### 7.1 Asian Wild Elephant

##### 7.1.1 Status

The existing literature from Asia on Wild elephant (*Elephas maximus*) habitat relationships suggests that Asian Wild elephant respond to both the temporal and spatial availability of resources viz. forage and water (Sukumar, 1989) and also profoundly respond to human disturbances (Desai and Baskaran, 1996). Historically, forests of Terai enabled Asian Wild elephants (*Elephas maximus*) in the north and northeast India to be in one contiguous, large population. Undoubtedly, Terai had a large resident population of Wild elephants in the past. The clearing of forests for agriculture, settlement and infrastructure development has fragmented their habitat, restricting their population only in some patches of forests and lowland Pas. PNP offers a good habitat for the resident wild elephant population of Nepal and has become one of the last mainstays for the survival. They are free ranging and migratory in nature and often come in conflict with local people. The Chure Terai Madhesh Landscape (CTML) landscape experiences high variations in water and forage distribution resulting in possible non-random elephant distribution. According to Ram et.al. (2021) Wild elephants are reported in Chure Terai Madhesh Landscape (CTML). There are around 200 Wild and 250 captive elephants (Ram and Acharya 2020) estimated across the fragmented landscape of CTML. PNP has been conserving this species at a landscape level approach minimizing conflicts and there are around 60-65 Wild elephants.

The Wild elephants in PNP face various challenges, including habitat loss, fragmentation, and human-wildlife conflicts. The conversion of forested areas into agricultural land, disturbed corridors and infrastructure development have led to habitat degradation and reduced connectivity in the PNP-CNP-VTR complex. As a result, there is increased incidents of human-Wild elephant conflict as elephants come into contact with human settlements and agricultural fields.

##### 7.1.2 Significance

Elephants are among the most intelligent and sensitive animals on the planet, with empathy and self-awareness that we have shared for centuries. They are keystone species that play a crucial role in maintaining biodiversity and ecological balance in their habitats. Their presence helps maintain healthy forest ecosystems, which support a wide range of plant and animal species. Wild elephants are also known as “ecosystem engineers” due to their ability to transform their habitats. In many societies, they hold cultural and spiritual significance and are revered in traditional beliefs and folklore, symbolizing strength, wisdom, and prosperity. Overall, the significance of wild elephant conservation extends beyond individual species and encompasses the preservation of ecosystems, cultural heritage, sustainable livelihoods, and our global commitment to biodiversity conservation and environmental sustainability.

### **7.1.3 Conservation Efforts**

Conservation efforts for wild elephants involve a range of strategies and actions aimed at protecting their habitats, mitigating human-elephant conflicts, promoting community engagement, and ensuring their long-term survival. Over the last three decades, Nepal has made significant efforts to conserve these mega vertebrate faunas through multi-pronged approaches that include national strategies, action plans, and landscape level management activities. As a result, Wild elephants in Nepal are protected by strict laws as they are enlisted as protected mammalian species under NPWC Act, 2029. It is also listed in Appendix I of the CITES list implying that the trade of this species and its body part is not permitted. Nepal collaborates with international organizations, conservation partners and neighboring countries to address cross-border conservation issues, share best practices, and promote regional cooperation in protecting their populations including habitats.

Nepal has developed Wild elephant conservation action plan 2009-2018 to develop long-term conservation of this key-stone species whose survival is tied up with the land use change in Nepal's Terai (lowland). This plan is revised and updated and will be approved very soon. These conservation efforts work in synergy to protect Wild elephants, their habitats, and promote harmonious coexistence between Wild elephants and local communities.

### **7.1.4 Issues**

- Little information available on the extent of elephant habitats;
- Rapid urbanization, conversion of forest for agricultural, and infrastructure development result in the loss and fragmentation of elephant habitats limiting their access to food, water, and suitable breeding areas, leading to increased human-elephant conflicts
- Encroachment of Wild elephant habitats often leads to conflicts;
- Retaliation related injuries and deaths;
- Disturbed and fragmented dispersal corridors;
- Human-Wild elephant conflict especially in the migratory route is high with low level of awareness to deter them;
- Inadequate trans-boundary coordination and cooperation; and
- Insufficient funding and resources for Wild elephant conservation.

### **7.1.5 Strategies,**

- Ensure adequate protection from encroachment, habitat degradation, retaliation and poaching;
- Restore habitats by proper land-use planning, habitat connectivity and reforestation; programs.
- Maintaining corridors and connectivity for safe movement of Wild elephant;

- Providing sufficient water, food and cover inside the park to retain resident Wild elephants;
- Promoting alternative land use practices and agriculture cropping systems
- Regulate relief delivery mechanism efficiently to reduce human Wild elephant conflict;
- Develop and implement strategies to mitigate human-elephant conflicts, including construction of physical barriers, early warning systems, and the use of deterrents.
- Collaborating with conservation partners and regional elephant experts for resource leverage and share information including research and study;
- Promoting wildlife friendly infrastructures in coordination with infrastructure development agencies; and
- Foster collaboration and information sharing with VTR to monitor and manage migratory mega fauna species and address the issues.

#### **7.1.6 Activities**

- Undertake plantation in corridors to maintain connectivity for Wild elephant movement;
- Construct small cascades in 4 streams to collect water for longer periods;
- Construct 2 Wild elephant bath-tubs at strategic locations;
- Construct RCC watch towers to monitor movement of wild elephant;
- Implement satellite based radio telemetry to problematic elephant and monitor to reduce human elephant conflict;
- Support livelihood intervention to the households whose family has been injured or killed by Wild elephant;
- Support bee-keeping as elephant deterring activities where wild elephant often gives trouble;
- Prepare a contingency plan with the help of team of expert to manage large herds aided by a team of experts in handling Wild elephants;
- Provide subsidies for alternative agriculture crops which are unpalatable to elephant in the BZ; and
- Implement conservation awareness activities to reduce human Wild elephant conflict.
- Participate Wild elephant related national and international conferences and workshops and seminar to share knowledge, experiences, and best practices in wild elephant management.
- Conduct transboundary meeting with VTR to share experiences and address issues and challenges related to Wild elephant; and
- Conduct Wild elephant census in PNP at every 3 years.

## **7.2 Royal Bengal Tiger**

### **7.2.1 Status**

Until the mid-twentieth century, tigers in Nepal were distributed along the contiguous lowland forests and alluvial grasslands and riverine forests of Nepal (Smythies, 1942; James et. Al., 1998 cited in Gurung et al. 2006). At present, tiger distribution is more or less restricted to three complexes (Chitwan-Parsa Complex, Banke-Bardia Complex and Kailali-Kanchanpur Complex) covering five Pas of TAL and adjoining forest areas including national and international biological corridors.

World leaders from thirteen tiger range countries including Nepal met in St Petersburg, Russia for tiger conservation forum in November, 2010 that aimed to double the numbers by year 2022. In line with this, Nepal expressed its commitment to double the tiger with the base population of 121 in 2009. By the year 2018, the country has made remarkable progress in tiger conservation efforts by reaching the number of 235 and was very close to achieve the target. Nepal has implemented several conservation initiatives to protect tigers and their habitats. The Status of Tigers and Prey in Nepal 2022 disclosed that tiger number has reached 355. There is an integrated role of Government as the lead and active role of conservation partners and local communities behind this success.

Similarly, in PNP, the population was 4 in 2009 and reached 41 in 2022. The protection and habitat management were found to be excellent in PNP as it was able to increase the number by almost 10 folds compared to the baseline population of 2009. The density of tiger and prey base in 2018 was 0.92 per 100 square kilometer and 22 per square kilometer respectively. With the protection and habitat management intervention the density of tiger and prey base reached 1.72 per 100 square kilometer and 75 per square kilometer by the year 2022. The increased density of prey base reflects the better intervention in protection and habitat management. Similarly, the study of ecological carrying capacity of Chitwan-Parsa complex, 2020 carried out by DNPWC disclosed that the complex can hold 175 tigers where CNP can hold 136 tigers and 39 by PNP. On the other hand, the carrying capacity depends upon habit condition and availability of prey. There are 41 tigers already and therefore Park has to increase the number of prey base to contain tiger in the core area. It can be alarming sign of human tiger conflict as well and thus, habitat management has to be emphasized to maintain human-tiger amity.

### **7.2.2 Significance**

The tiger holds significant ecological, cultural, and economic importance, making its conservation crucial. Tiger (*Panthera tigris tigris*), an umbrella species at an apex of the natural food chain, is an indicator of a healthy ecosystem. Tiger is a wide-ranging species that requires ecological and genetic connectivity and large spatial habitats. Being a keystone species, it has been leveraging for biodiversity conservation and it is also an icon for eliciting public support towards conservation. Tigers hold immense cultural and spiritual significance in many societies

as they are revered as symbols of power and strength. They have historically been depicted in art, folklore, and mythology. Tigers are a central attraction in wildlife tourism and people travel from around the world to see tigers in their natural habitats. The tiger conservation also contributes to generate revenue for local communities, promoting conservation as a sustainable livelihood option. The species is listed as endangered in the International Union for Conservation of Nature (IUCN) Red List and listed under Appendix-I by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). The Government of Nepal has listed the tiger as a protected animal under the National Parks and Wildlife Conservation Act, 2029.

### **7.2.3 Conservation efforts**

The conservation history of tigers spans several decades and has seen various initiatives and milestones aimed at protecting and preserving this beautiful wild animal. The conservation of tigers in Nepal can be studied in three phases. Tiger conservation in Nepal began with the launch of the tiger ecology project in 1972 in Chitwan (McDougal, 1977; Smith, 1993) followed by the establishment of CNP is considered as the first phase. Since then, Nepal Government has established an additional four PAs; BNP, PNP, Banke National Park (BaNP), and Shuklaphanta National Park (ShNP) for the conservation of tigers.

The second phase begun in 1995 with the concept of people's participation in biodiversity conservation with the introduction of Buffer Zone. This program brought revolutionary change as it involved local communities in conservation and development. Nepal started to carry out tiger census from 1995 in every four years. During the period Nepal developed its first Tiger Conservation Action Plan (TCAP) 1999 which was revised in 2007. Highlighted to protect country's tiger population and their habitats developing appropriate strategies and actions to address key conservation challenges. The second revision of TCAP 2008-2012 was more comprehensive which aims to safeguard tiger populations by addressing threats such as habitat loss, poaching, human-wildlife conflict, and illegal trade.

The third phase begun in the year 2010, when the head of GoN participated tiger conservation forum in Saint Petersburg, Russia and expressed commitment to double the tiger number within 10 years. Nepal shifted its conservation focus from protecting isolated core Pas to designing and managing conservation landscapes focusing on providing connectivity between wildlife populations (Wikramanayake et al., 1998). TAL was the first conservation landscape in Nepal that was designed based on tiger dispersal within and outside of PA. During this period, additional habitats for tigers and prey species have been secured, namely with the establishment of BaNP, extension of Parsa National Park. Restoration of critical corridors for facilitated movement of tigers not just between Nepal's disparate protected areas, but also in facilitating transboundary movement of tigers between Nepal and India. TCAP 2016-2020 was developed which focused more on doubling the tiger by the committed period. Similarly, DNPWC developed tiger and prey base monitoring protocol in 2017 which guides to undertake systematic

monitoring. The tiger count was conducted in 2018 and revealed that Nepal is very close to achieve in doubling the tiger numbers. The tiger count was undertaken in 2022 and became the first country to officially announce achievement to double the tiger number.

#### **7.2.4 Issues**

- Habitat degradation mainly due to drying up of wetlands, shrinkage of grassland by woody perennials and invasion by alien invasive species;
- Habitat fragmentation due to large linear infrastructure development (such as roads, and high-tension lines);
- Encroachment in the dispersal corridors has disturbed the tigers movement;
- Illegal entry of local people for collection of natural resources disturbs tiger;
- Tiger requires large and inviolated areas for ensuring its long-term survival;
- Inadequate knowledge on tiger ecology, demographic patterns and population dynamics, particularly in surrounding areas;
- Inadequate human resources, technical skills and physical capacity to gather necessary information on tigers, and prey base species and prey population dynamics;
- Limited funding hampers conservation activities, including anti-poaching efforts, habitat management, community participation;
- Slow process of relief delivery to wildlife victims;
- Poor safety measures outside Pas including dispersal corridors outside BZ.

#### **7.2.5 Strategies**

- Developing landscape approach of habitat management to restore critical corridor;
- Collaboration with academic/conservation institutions to enhance knowledge and information on tigers and its prey base monitoring, behavioral ecology and movements;
- Measuring demographic parameters of tigers using standard protocols and methods (abundance, survival, dispersal, source-sink dynamics etc.);
- Addressing human tiger conflict through improved community participation for effective relief mechanisms and enhanced livelihood options,
- Strengthening institutional network and coordination for CITES enforcement, wildlife crime control, illegal trade in wildlife and its derivatives;
- Strengthening anti-poaching efforts in and around the Pas by mobilizing security personnel, local communities and civil societies;
- Developing information, education and communication strategy to address the issues pertinent to tiger-human conflicts;
- Pooling the resources to implement HWC action plan effectively to maintain amity between Park and people; and
- Regulating relief funds in an effective manner to immediately support human injury and casualty.

### 7.2.6 Activities

- Prepare land use map of PNP and forest corridors focusing on effective management of wetlands and grasslands;
- Undertake an assessment of tiger population viability and carrying capacity in PNP;
- Monitor problem tiger placing radio collar and share the information;
- Support alternative livelihood opportunities for forest dependent marginalized households;
- Undertake tiger count in every five years by camera trapping method following approved protocol;
- Monitor tigers around the human activity areas with local community engagement;
- Celebrate World Tiger Day on 29<sup>th</sup> July every year and take opportunity to promote tiger conservation awareness;
- Erect signs of warning to the passersby in the major rights of ways, resource collection sites and shrines;
- Equip anti-poaching units with all necessary field gears and equipment; and
- Undertake trans boundary cooperation meetings with VTR India.

## 7.3 Gaur (*Bos Gaurus*)

### 7.3.1 Status

In Nepal, Gaur is confined to the forests and grasslands of the Churia, Bhabar and floodplains. Contiguous habitat in Chitwan and Parsa National Parks and adjoining areas harbor the largest population. Gaur is found to dwell in mixed deciduous hardwood forest, in the foothills of Churia range especially around Bhata, Charbhaiya and Mahadev Khola range (Chhetri, 1999) in the core area of the Park.

In Nepal, the gaur population was estimated to be 250–350 in the mid-1990s, with the majority in CNP and the PNP. A survey in 2007 recorded 37 individuals in PNP and 297 in CNP (Jnawali et al. 2011). The combined survey of PNP and CNP in 2013 showed 21 in PNP and 312 in CNP (CNP 2013). The Gaur population found in east Nepal mainly confined to Trijuga forest, Udayapur District has been nearly extirpated. The population census of Gaur 2016 showed that there were 105 Gaur in PNP and this number increased to 164 in 2020.

### 7.3.2 Significance

The Gaur bison (*Bos gaurus*) is the largest extant bovine, native to South Asia and Southeast Asia. They are large herbivores and act as important grazers, shaping the structure and composition of plant communities. Gaur serves as a significant prey species for large carnivores such as tigers and leopards. Its presence helps sustain healthy predator populations, contributing to the overall balance and functioning of the ecosystem. Gaur is considered a flagship species and an indicator of the health of its habitat. Its presence indicates the conservation value and

ecological integrity of the forest ecosystems it inhabits. Gaur can be an attraction for nature-based tourism. Their presence in PNP can create economic opportunities for local communities through ecotourism.

*Bos gaurus* is listed in CITES Appendix I. The species has been listed as vulnerable by the IUCN Red List since 1986, as the population decline in parts of the species' range is likely to be well over 70% during the last three generations. The Gaur is a protected species in Nepal which is listed in the NPWC Act, 2029.

### **7.3.3 Conservation Efforts**

Gaur (*Bos gaurus*) historically occurred throughout mainland South and Southeast Asia and Sri Lanka. At present, it is distributed in South and Southeast Asia (Ashokkumar, M., Swaminathan, R., Desai, A. 2011, Choudhury 2002; Kamalakkannan et al. 2020; Kamalakkannan et al. 2020). In Nepal, Gaur is confined to the forests and grasslands of the Churia, Bhabar and floodplains. It is mostly found in CNP-PNP complex, The population of Gaur was also recorded in Trijuga forest and Koshi Tappu Wildlife Reserve (KTWR). However, in 2018, NTNC studied showed that it has disappeared from Trijuga forest and KTWR. Gaur is at risk from multiple stressors, major of which include anthropogenic activities such as poaching, habitat fragmentation and shrinkage, over-exploitation of resources, and invasive plant species. Isolated small population with high predation risk could be another threat to its long-term survival and genetic diversity of this species.

The Government of Nepal has taken the highest conservation consideration by enlisting Gaur as protected mammalian species under Schedule I of NPWCA, 2029. The International Union for Conservation of Nature (IUCN) categorizes the Gaur as vulnerable, highlighting the need for continued conservation action. Few studies have been undertaken focusing on Gaur research and conservation in Nepal. The first population survey of Gaur was carried out in 1990s. Since then, periodic population monitoring has been conducted in CNP and PNP. Nepal developed its first Gaur conservation action plan 2020-2024 to develop strategies and actions to protect this animal. The action plan highlights to conserve this beautiful species by restoring its corridors to connect fragmented areas, improving habitat, conservation awareness and community involvement. Continued efforts are essential to ensure the long-term survival of gaur populations and their ecological role in the ecosystems they inhabit.

### **7.3.4 Issues**

- Habitat loss, fragmentation and degradation;
- Lack of water in Bhawar region during dry seasons;
- Forest fire destruction the core habitat of gaur.
- Poaching, illegal wildlife trade and opportunistic hunting
- Human wildlife conflict

- Low level of awareness about the importance of gaur conservation
- Absence of population management due to inadequate information about it;

### 7.3.5 Strategies

- Identify critical gaur habitats for restoration and habitat management;
- Combating poaching and illegal wildlife through increased law enforcement;
- Implement measures to reduce conflicts between Gaur and local communities;
- Regulate relief delivery mechanism in effective and efficient manner;
- Promote alternative crops not preferred by Gaur;
- Collaborate with Research institution to carry out research;
- Network, coordinate and collaborate with conservation partner to improve the livelihood of local communities; and
- Control forest fire control and maintain fire lines.

### 7.3.6 Activities

- Conduct Gaur count in 4-5 years;
- Document and analyze the Gaur poaching cases;
- Document ethnic, religious and traditional belief on Gaur;
- Construct Gaur statue in strategic areas like Amlekhjung, Subarnapur, Pratapur, and Nijgadh;.
- Develop Gaur trail (hiking, walking or cycling) in Churia region of PNP; and
- Organize experience sharing meeting among PNP, CNP and VTR and concerned local authorities.

## 7.4 Pangolin

### 7.4.1 Status

Pangolins are popularly known as ‘Salak’ in Nepal. Only eight species of pangolins survive in the wild (Corbett & Hill 1992, Gaubert & Antunes 2005). Of these, four species occur in Asia – the Indian pangolin (*Manis crassicaudata*), the Palawan pangolin (*M. culionensis*), the Chinese or Formosan pangolin (*M. pentadactyla*), and the Malayan or Sunda pangolin (*M. javanica*). Only two species are recorded in Nepal: Chinese Pangolin or Formosan Pangolin (*Manis pentadactyla* Linnaeus, 1758) and Indian or thick tailed Pangolin (*M. crassicaudata* Gray, 1827) (Shrestha 2003). Chinese Pangolin prefers sub-tropical region (1000-2000m) whereas Indian Pangolin are found in tropical regions below 1000m (Chakraborty et al. 2002).

Pangolins can be found in a variety of habitats in Nepal, ranging from the Terai to the mid-hills, including grasslands, forested areas, bamboo and coniferous forests, and agricultural lands. Despite Pangolin’s widespread distribution, there is little information on the species’ overall status in Nepal, owing to a lack of studies focusing on the species’ ecology. Pangolin habitats, on the other hand, appear to be abundant. Since pangolin habitats are found near human settlements,

they have been threatened by humans. Their habitats outside of Protected Areas (PA) are severely degraded as a result of unsustainable climate-induced disasters such as prolonged drought, fire, and landslides.

#### **7.4.2 Significance**

The GoN has listed both species of pangolins under schedule I of NPWC Act 2029. Both species of pangolins found in Nepal are categorized as Endangered by National Red List of Mammals (Jnawali et al. 2011, Amin et al. 2018). CITES Act 2074 also prohibit any illegal taking, killing and trading of wildlife species. However, pangolins have been exploited locally for decorative material, food and traditional medicines through history. This continues today, and main threat to pangolins today is hunting and poaching for illegal international trade. This typically involves live pangolins, and their meat and scales, which are primarily destined to East Asia, most conspicuously China and Vietnam.

#### **7.4.3 Conservation effort**

The Pangolins are under threats mostly due to poaching, illegal trade and loss and degradation of their habitats. The species is highly threatened due to high demand of its skins, scales, and meat in the local and international illegal wildlife trade market. Pangolin is one of the most elusive and poorly studied small mammals across its range. The GoN of Nepal is committed to conserve and safeguard threatened and endangered wildlife including pangolins. Both species are listed in schedule I of NPWC Act, 2029 included in Appendix I of Convention on Illegal Trade in Endangered Species of Wild Fauna and Flora (CITES). NPWC Act, 2029 has been referred to the illegal trade of Pangolin and its body parts. In 2074, GoN promulgated CITES Act, 2074 which has been considered important legal instrument to discourage the trade of body parts of Pangolin.

Pangolin poaching is rising with the increasing number of seizure cases, mainly around Kathmandu valley, indicating alarming state of this beautiful animal. The DNPWC, CIB, and WCCB have been collaborating to combat poaching and save this magnificent animal. Similarly, various non-governmental organizations (NGOs) have been implementing community-based pangolin conservation, primarily in the Kathmandu valley, and CFs have begun to include pangolin conservation in their operational plans (OP). Pangolin status and distribution research has recently begun. Most notably, a Pangolin Conservation Action Plan (2018-2022) has been developed and is currently being implemented.

#### **7.4.4 Issues**

- Limited information and knowledge on pangolin ecology and population dynamics;
- Pangolins are hunted for local consumption of meat and medicinal purpose and use in garland such as boots, belts and handicrafts;
- Increasing demand for pangolin body parts in the international black market;

- Loss of habitats due to fragmentation and encroachment of forest and fringe areas for agricultural expansion and development of Infrastructures;
- Extraction of red soil for domestic use causing habitat degradation, loss of burrows and disturbance;
- Frequent wild fires;
- Climate change can cause prolonged dry spells, heavy rainfall, floods and flash floods resulting in possible scarcity of water resources;

#### **7.4.5 Strategies**

- Enhance understanding and knowledge on conservation status, ecology and habitat dynamics of pangolin through engaging academic and research institutions
- Identify and manage priority sites to improve habitat quality for pangolin conservation;
- Curb poaching and control illegal trade of pangolin;
- Develop local stewardship for conservation of pangolin; and
- Develop awareness packages for policy makers, developers, local government and local communities.

#### **7.4.6 Activities**

- Organize regular coordination meetings at local and regional level for sharing information on pangolin related activities;
- Organize regular trans-boundary conservation cooperation meetings with neighboring countries;
- Assess local knowledge, traditions, attitude and perceptions on pangolin conservation;
- Conduct awareness campaigns on Pangolin conservation; and
- Formulate and implement mitigation measures for development and other construction works in the prime/designated pangolin habitats.

### **7.5 Conservation of Rhino, key small mammals, herpetofauna, birds, fish, butterfly and other animals**

#### **7.5.1 Activities**

- Construct wallowing spots for Rhino at Pratapur and improve water supply in existing water holes;
- Provide support to management of problem animal, injured wildlife and orphan wild animal including provision of food and treatment;
- Conduct species, population and habitat survey of turtle;
- Undertake activities to conserve Bengal florican in PNP;
- Update the status of habitat composition of Flora of PNP;
- Update the birds of PNP;
- Update the list of herpetofauna of PNP;

- Update the list of butterflies of PNP;
- Update the list of fishes in PNP;
- Pilot 2 canopy bridge along Pathlaiya-Amlekhgunj road of east-west highway to reduce roadkills of moneky;
- Carry out satellite tagging of rare, endangered and protected bird species;
- Erect hoarding boards in the highways to reduce animal hit and aware the general public about the risk factors on small mammals;
- Contol the feral dogs in the core area; and
- Procure tools and equipment required to run Rapid Response Team.

## Chapter VIII

### 8. Tourism and Interpretation

#### 8.1 Background

##### 8.1.1 Tourism scenario

The link between PA and tourism Nepal is as old as the history of tourism. PA mainly in National Parks and Conservation Areas are one of the popular tourist destinations in Nepal. It is evident that tourism generates revenue for conservation and conservation promotes tourism.

PNP's main tourist attractions are its unique topography and pristine and diverse biodiversity including globally significant wildlife species such as Asian Wild elephants, Royal Bengal tigers and Rhinoceros, and a herd of Gaur. The cultural practices of indigenous ethnic groups such as Tharu (in the south), Tamang (in the rural municipalities of Handi Khola, Churiamai, and Padampokhari), and Praja and Bote (Chepang in Ramauli-Pratappur) are interesting tourist attractions in the buffer zone. Tourists may also visit the temples of Dugdeswor Mahadev, Ram Janaki, Gadhimai, and Bhairawi Parbati, as well as the Baishakh Purnima festival, Bhata, Pratapur, Kamini Daha, Gainda Dhap, and Halkhoria Daha.

Despite the fact that PNP was established in 1984 as a reserve and changed its status to NP in Ashad 19, 2074 to open it for tourism and contribute towards livelihood improvement of BZ communities, it has yet to become a tourist destination. To promote tourism in PNP, emphasis should be placed on conserving wildlife populations, development of tourism infrastructure and tourism products, improving services, marketing and promotion of the area, and improving the livelihood of local community. Visitors can experience nature tourism but there are very few tourism development activities taking place due to a lack of infrastructure and tourism management systems. As a result, tourism in PNP is still in infancy stage.

There are very few tourists who visit the PNP (Annex X). Tourist arrivals are expected to increase following the inclusion of Halkhoriya Lake in the east and development of tourism infrastructure in the Pratapur area. The tiger sighting in the Park is so high and jeep safari has also been started from Aadhavar, Nijgadh and Subarnapur. The tourism infrastructure development is taking place in Amlekhgunj, Pratapur, and Nijgadh areas and these three areas will be established as tourism hub. Similarly, tourism hub will also be established in Subarnapur area. The area will attract more visitors as it will be going to be very close from Kathmandu when fast track Nijhgadh-Kathmandu Road is completed. Similarly, Nijgadh international airport is also going to be developed which will entice the visitation in the national park.

Visitors can enjoy jeep safari, elephant safari, guided jungle walk and bird watching. The tourism activities that are available in PNP are mentioned in Table 3.

Table 3: Tourism activities available in PNP

| Place       | Entry Gate | Tourism products                                                                                                                                 |
|-------------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Aadhavar    | Aadhavar   | <ul style="list-style-type: none"> <li>• Jeep safari,</li> <li>• Jungle walk,</li> <li>• Visitor Information Centre</li> </ul>                   |
| Amlekhgunj  | Amlekhgunj | <ul style="list-style-type: none"> <li>• Jeep safari,</li> <li>• Jungle walk,</li> <li>• Elephant safari</li> <li>• Elephant bath tub</li> </ul> |
| Pratapur    | Pratapur   | <ul style="list-style-type: none"> <li>• Jeep safari</li> <li>• Elephant safari</li> <li>• Bird watching</li> </ul>                              |
| Halkhoriya  | Halkhoriya | <ul style="list-style-type: none"> <li>• Jeep safari</li> <li>• Bird Watching</li> </ul>                                                         |
| Kamini daha | Amlekhgunj | <ul style="list-style-type: none"> <li>• Jeep safari, jungle walk</li> <li>• Bird watching</li> </ul>                                            |
| Bhata       | Gaduwaline | <ul style="list-style-type: none"> <li>• Pay homage to Dugdeshwor Mahadev</li> <li>• Jeep safari,</li> <li>• Bird watching</li> </ul>            |

Nijgadh, Simra, Amlekhgunj and Pratapur are the main entry point to enter the park where more 18 hotels (Pratapur-2, Amlekhgunj-3, Simra-10, Nijgadh-3), and 16 group homestays (Subarnapur-15, Manahari-1) provide tourism services in PNP. Indian tourists often visit PNP staying in the hotels of Birgunj and enter the Park through Subarnapur, Aadhavar and Amlekhgunj and found to return same day. There are two companies to operate jeep safari in Aadhavar, Amlekhgunj and Nijgadh. For Subarnapur area, Madhesh Province has provided one vehicle to operate jeep safari in the area. The major tourism activities and routes are given in Table 4.

Table 4: Routes for various tourism activities

| Tourism activities       | Route 1 (Aadhavar)                                                                      | Route 2 (Nijgadh)                                                                             | Route 3 (Subarnapur )                                                      | Route 3 Pratapur                                                   |
|--------------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|--------------------------------------------------------------------|
| Jungle Drive/Jeep Safari | i) Aadhavar-Charbhaiya-Rambhori<br>Bhata-Ratomate-Kali daha-Amlekhgunj<br>ii) Aadhavar- | i) Nijgadh-Halkhoriya-Ratanpur-Shakti jharana-Amlekhgunj<br>ii) Nijgadh-Halkhoriya-Sahajnath- | i) Subarnapur-Bhata-Aadhavar-Subarnpaur<br>ii) Subarnapur-Bhata-Subarnapur | Manahari-Pratapur-Sunachari machan-Jyamire-Chauraha khola-Manahari |

|                       |                                                                                   |         |  |  |
|-----------------------|-----------------------------------------------------------------------------------|---------|--|--|
|                       | Mahadev-Kali<br>daha-<br>Amlekhgunj<br>iii) Aadhavar-<br>Halkhoriya-<br>Sahajnath | Nijgadh |  |  |
| Guided<br>jungle walk | i) Aadhavar-<br>Mahadev-<br>Kalidaha-<br>Amlekhgunj                               |         |  |  |
| Elephant<br>Safari    | i) Amelekhgunj<br>area<br>ii) Pratapur area                                       |         |  |  |

### 8.1.2 Interpretation Facilities

Visitors travel to see, learn about, and experience natural or cultural landscapes, sites, features, objects, people, events, heritage, and stories. Therefore, interpretation facilities are designed to provide information, engage visitors, and create opportunities for learning and interaction. A good interpretive plan is essential for long-term tourism success. VIC is one of the important interpretation facilities which include exhibits, displays and audiovisual presentations. They may also offer amenities like restrooms, gift shops, and educational resources. The Park intends to build a multipurpose VIC with a ticket counter, information display center, video documentary showing hall, museum, souvenir shop, restaurant, and rest room in Aadhavar. Similarly, VIC will be developed in ECF of Amlekhgunj and Pratapur as well. A display board with availability tourism products will also be displayed at Simra Airport to provide firsthand information about what the visitor can experience. Similarly, large hoarding boards will be placed in the highway's major elephant corridor. Minimum information providing display boards will be placed throughout the ticket counter so that visitors can get information while waiting in line.

### 8.1.3 Issues

- Inadequate development of tourism infrastructure;
- Limited tourism products;
- Lack of tourism promotion and marketing;
- Inadequate private sector investment in tourism business;
- Lack of dedicated institutional setup to deal with tourism;
- Unaware of the potential of PNP area as a vast ecotourism site for recreation and economic prosperity; and
- Lack of investment by other institutions such as tourism sectors and local Government.

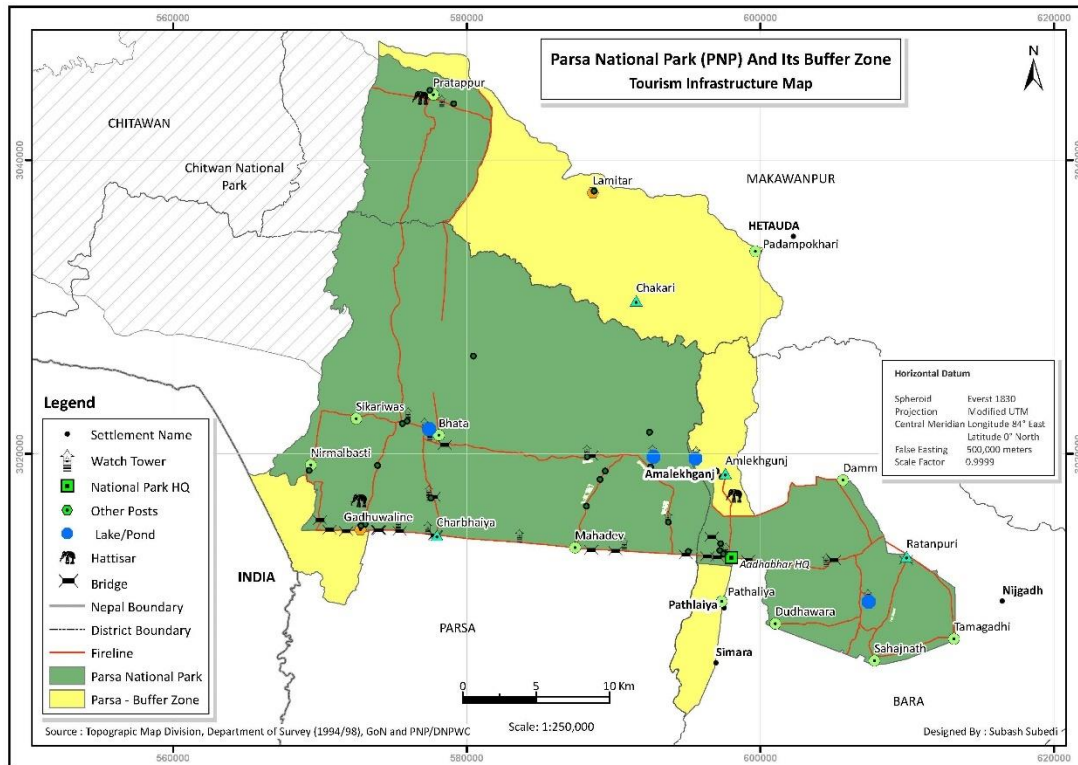


Figure 13: Existing infrastructure for tourists

## 8.2 Tourism Management

### 8.2.1 Strategies

Developing a comprehensive tourism strategy in PNP involves careful planning and consideration of various factors to promote tourism in such a way that it contributes to local economy without negative impact on natural resources and culture. The strategies will be taken from developing tourism infrastructure in the Park and BZ, marketing in the local, regional, national and international arena, service and facilities and visitor satisfaction in the following manner:

- Develop tourism infrastructures in Subarnapur, Pratapur, Amlekhgunj and Nigadh as the three main hub through the collaboration with Provincial Government, local level and private sector;
- Offer tourism products in Aadhavar, Amlekhgunj, Pratapur and Halkhoriya with visitor centers, interpretive programs, guided tours (elephant safari, jeep safari and jungle walk), and other offerings that align with the park's unique natural and cultural attributes;
- Disseminate available tourism attractions of PNP in the national, regional and international market using various social media platform, tourism blogs, Podcast YouTube, TV channels, print media such as newspapers and travel magazines;
- Use celebrity as ambassador of PNP to promote tourism;
- Promote private entrepreneurs to operate tourism business by opening hotel, transportation business, restaurants thereby providing conducive environment;
- Provide office space in the Park for nature guides and jeep safari operators;

- Establishing partnerships with tourism operators to offer discounts and special packages and schemes such as Travel Give Way and Hotel Give Way and Refer-a-Friend Travel Giveaway
- Foster positive relationships with local communities, businesses, and stakeholders and involve them in the marketing efforts by collaborating on events, initiatives, and promotions.

### **8.2.2 Institutional Setup**

The tourism sector in Nepal is developed, managed and controlled by a combination of public sector, private sector and Private Public Partnership (PPP) bodies. Tourism management includes tourism planning and development; coordination; marketing and promotion; and regulation and control. In PNP, the tourism is managed by Park authority to devise and implement regulatory framework for tourism operators to ensure eco-friendly practices, energy and water use, extent and capacity of the facilities to be created, employment to local people, social and environmental responsibility, etc. PNP will coordinate efforts to encourage private investors or community organizations to develop tourism by operating hotels for food and lodging, tour guide operators, elephant safari operators, transportation services to operate jeep drives, community organizations to perform cultural shows, banks, and health care services. Similarly, travel operators are encouraged to operate buses from various locations to Aadhavar, particularly Hetauda, Birgunj, and Nijgadh.

Similarly, coordination, marketing and promotion is undertaken by tourism related national level organization such as Nepal Tourism Board (NTB), Federation of Nepalese Chambers of Commerce and Industries (FNCCI), Hotel Association Nepal (HAN), and Nepal Association of Travel Agents (NATA). They can implement programs which can attract a large number of international and domestic tourists in the Park. In addition to this, marketing and promotion is also carried out by the private sector at local level such as all three-district chapters of Hotel Association Nepal (HAN) of PNP. At the moment, there is no tourism section in the Park office and for effective tourism management; a separate unit responsible for tourism management should be established in the near future.

### **8.2.3 Impact Minimization**

Tourism has become one of the main income sources and is considered as one of the main instruments for regional development with economic development, employment generation and production of goods and services. However, tourism may also have a negative impact on the environment and culture. As a result, concepts such as eco-tourism, responsible tourism and sustainable tourism have evolved. Therefore, while managing tourism, one should pay attention that there should be optimum utilization of natural resources and minimization of ecological, cultural and social impacts. Because tourism in PNP is in its early stages, now is an excellent time to begin impact reduction efforts. PNP will monitor tourism activities in and around the

Park and its BZ in collaboration with BZ communities, hotel associations, and local government. Similarly, private entrepreneurs will be consulted in order to discuss and evaluate the effects of tourism. Developing Tourism Code of Conduct and enforcing to abide by it through interpretation facilities, such as notice and sign boards at visible places, should be done. Similarly, study of impact from existing tourism practices in wildlife and its habitat has to be undertaken.

#### **8.2.4 Tourism Product Diversification**

Tourism product diversification involves developing and promoting new tourism products and experiences that go beyond the traditional attractions, catering to different market segments and visitor preferences. Tourism product diversification allows to offer a broader range of experiences by developing new attractions, activities, and experiences. Tourism development has already begun in PNP with infrastructure construction underway and identification of various tourism products. PNP will collaborate with CNP and tourism operators to encourage visitors to have unique experience of PNP with lengthening their stay. It will be accomplished by displaying Park information in the VIC of CNP. Similarly, CNP tourism operators will be encouraged to engage in some round-trip tourism activities. A multipurpose fire line with gravel topping will be built, allowing for a jungle safari from CNP to PNP and connecting the two Parks' tourism activities. Homestays, hotels and lodges, cultural programs, jungle safaris, elephant safaris, bird watching, wildlife sighting, and camping will be encouraged to offer a variety of tourism activities in and around the Park.

#### **8.2.5 Nature interpretation**

Nature interpretation is the mediation of feelings and knowledge of nature. Initially nature interpretation linked to create an understanding of nature conservation, to contribute to people's knowledge and to provide opportunities for good nature experiences. Presently, it is more focused to create an understanding of fundamental ecological and cultural interconnections, as well as people's role in nature. Thus, nature interpretation plays a crucial role in enhancing visitor experiences and fostering conservation education. The attempts should be made to engage visitors by appealing to their senses, emotions, and interests. Similarly, adopting story telling about history, ecology, culture significance and personal experiences is also found to be powerful tool in nature interpretation. Nature interpretation is carried out through interpretation facilities and certified nature guides.

#### **8.2.6 Activities**

- Undertake GPS mapping of tourism products in PNP;
- Construct 1 multipurpose Visitor Information Centre (VIC) at Aadhavar that includes ticket counter, display centre, museum, documentary showing hall, souvenir shop, refreshment centre, and rest room;
- Construct 2 VIC in ECF of Amlekhgunj and Pratapur;

- Construct 2 community culture centre at Amlekhgunj and Pratapur;
- Support to develop 3 community cultural museum at Subarnapur Homestay, Amlekhgunj, and Pratapur;
- Construct 6 entry gates in (at Sahajnath, Ratanpuri, Lamitar, Pratapur, Gaduwaline and Charbhaiya);
- Construct 2 welcome gate in Amlekhgunj and Pathlaiya;
- Construction of raised platforms or embark points for elephant safari, at least, in 2 places;
- Construct 1 suspension bridge at Pratapur;
- Pilot 1 canopy walk in Amlekhgunj (Churia-Kamini daha);
- Upgrade bhata-Pratapur 28 km fire line for tourism purpose;
- Renovate, maintain and repair 3 elephant embark points;
- Construct 10 km all weather road from Charbhaiya to Bhata temple;
- Construct 3 peeping towers for bird watching and tiger sightings.
- Place information or hoarding boards showing important tourist destinations and tourism products at key locations such as Amlekhgunj, Pathlaiya, Nijgadh, Simra Airport, Hetauda, Birgunj and Bharatpur;
- Place signage at strategic places of the Park to show direction to the visitors;
- Organize PNP cycling tour event;
- Conduct nature guide trainings including refresher training and certification to local and interested individuals giving priority to marginalized, vulnerable and socially excluded sections of the community;
- Conduct trainings for local homestay operators about business planning, hospitality, security of visitor's belongings, cook and house-keeping trainings;
- Organize cottage and small business development and management training;
- Install dustbin in the BZ in proper numbers as per tourist pressure;
- Organize Clean-up campaign to manage waste in the highway (waste collection and disposal);
- Organize local food festival in PNP;
- Prepare operational and management guidelines for home stay in PNP;
- Organize meeting with travel operators for the schemes of Travel Give Way and initiate direct luxury bus service to Aadhavar or Amlekhgunj from Kathmandu, Pokhara and Chitwan.
- Organize special events, nature festivals, workshops, and guided hikes within the national park on the occasion of World Tourism Day on September 27.
- Organize PNP day on Baisakh 5 through various activities;
- Organize learning visits for local tourism entrepreneurs to other PAs mainly ACAP, CNP and Sagarmatha National Park (SNP);
- Provide support to journalists to visit PNP and publish article;

- Publish conservation messages and articles in newspaper;
- Provide support to produce video spot for tourism advertisement;
- Production of a video documentary to attract tourists in PNP;
- Provide support to produce radio products for advertisement to air through Radio FM; and
- Advertise tourism attractions in PNP through Video Spot, Television, Radio and FM radio at national and local level;

## **Chapter IX**

### **9. Other Programme**

#### **9.1 Climate change mitigation and adaptation**

##### **9.1.1. Context**

Nepal is exposed to a range of climate risks and water-related hazards triggered by rapid snow- and ice-melt in the mountains and torrential rainfall episodes in the foothills during the monsoon season and therefore vulnerable to climate change. Nepal's National Adaptation Plan of Action (NAPA) predicts warmer winter temperatures and increased winter and monsoon precipitation in the country, which will occur in unpredictable and severe weather events (MoE 2010). Given these predicted trends in climatic conditions and their socio-ecological consequences, it is important to integrate un/expected impacts into PA management plans and strategies.

Churia region plays crucial role in regulating water in the upstream of Chure and downstream of Bhavar region. Climate change-induced alterations in precipitation patterns and hydrological regimes can affect water availability for wildlife and human. Changes in water availability can also impact the livelihoods of communities that rely on agriculture and water resources for their sustenance. Climate change is likely to affect the vegetation and forest types, and the ecological communities they support (Thapa et al. 2015). Forest types that are resilient to climate change should be protected to conserve the ecological communities and species assemblages. Uncertain and unpredictable rainfall and the ensuing floods could cut off habitat connectivity and prevent animals from seeking refuge. During drought periods, wildlife should be able to move to water sources and escape fires.

##### **9.1.2. Issues**

Major issues of concern in the face of likely impact of climate change at PNP are:

- Inadequate preparedness for flash floods and prolonged drought;
- Inadequate preparedness for flash floods;
- Drying up of wetlands and water holes;
- Drying of grasslands;
- Extended dry spells increasing fire risks; and
- Emergence and spread of invasive species in recent years;

##### **9.1.3. Strategies**

- Enhancing knowledge and understanding regarding climate change impacts on species, ecosystems and local communities through research and documentation;
- Improving ecosystem resilience through management of climate induced stresses mainly during extended dry spells;
- Promoting climate resilient livelihood diversification;
- Enhancing the capacity of Park staff, Security persons, and BZ communities to cope with the climate change impacts;

- Adopting climate smart technology to reduce the impact of climate change; and
- Coordinating and collaborating with key stakeholders and line agencies to mitigate impacts of climate induced disasters and change.

#### **9.1.4. Activities**

- Prepare integrated water resource management plan that account for changing precipitation patterns and water availability;
- Undertake activities for water source protection;
- Undertake vulnerability assessment with respect to climate change;
- Detail mapping of flood vulnerable communities and infrastructures in PNP and BZ;
- Prepare local Disaster and Climate Resilience Plan for all the municipalities and rural municipalities in BZ;
- Support the implementation of disaster risk reduction and adaptation priorities of BZCF;
- Undertake plantation in BZ to maintain balance between fuel wood demand and supply for the household of local people;
- Carry out planation of soil binder species along the river banks to control landslide;
- Plantation of trees outside of the forests in public and private land;
- Introduce appropriate biomass energy technologies to reduce fuel wood consumption;
- Undertake soil and moisture conservation works in Chure to control sediment flow and landslide in downstream;
- Construct any soil conservation measures in various streams/rivers to protect wildlife from floods; and
- Support BZCFs to link with the market towards carbon financing.

## **9.2 Solid Waste Management**

### **9.2.1 Context**

The management of waste produced by visitors, park operations, and concessionaires, and the impact it has on both protected areas and adjacent communities is a growing concern for PNP.

In PNP and BZ, the organic waste mostly produced by the kitchen is reused for cattle feeding and organic manure production. Whereas disposal of other non-degradable categories of collected waste (glass, metal, and plastic) is not properly managed. Particularly, burning in open dumps pose a great hazard to environmental, human, and animal health. Similarly, dump sites close to water sources contaminates and pollute rivers and lakes.

In the BZ, water sources along the major trails are being contaminated with plastics and water bottles. In some places, sewerage and toilet waste can be found piped into nearby streams. The BZ institutions should actively participate in control of various forms of pollution and attempt to make the control system more sustainable by involving local people with support from other stakeholders and focus more on reducing waste generation and proper disposal systems.

### **9.2.2 Issues**

- Garbage management is an ongoing challenge to keep Park and BZ clean despite several initiatives already in place;
- Inadequate knowledge on proper disposal and recycling of the solid waste among local communities;
- Poor coordinated effort to address the issue of garbage and pollution management along highway;
- Lack of garbage management guidelines; and
- Inadequacy of the fund required for maintaining sanitation in the Park and BZ.

### **9.2.3 Strategies**

- Develop water, sanitation and hygiene guideline for local communities in PNP;
- Work with provincial and local government, communities, private sector, and conservation partners to implement sanitation programme; Promote waste reduction practices by banning plastics, promoting reusable items, and providing water refilling station;
- Establish waste collection bins labelled with different types of waste, including recyclables, organic waste, and non-recyclable waste;
- Promote recycle, reuse, reduce, remove, and reject (4R) approach to manage wastes in the Park;
- Develop educational materials and signage to inform visitors about proper waste management practices; and
- Mobilize eco-clubs to raise awareness about importance of solid waste management.

### **9.2.4 Activities**

- Provide support to demonstrate proper techniques of garbage disposal and recycling techniques;
- Provide support to manage garbage with special focus on reducing production, recycling, by prohibiting use of polluting items such as plastic bags;
- Installing clearly labeled waste bins for different types of waste, such as recyclables, organic waste, and non-recyclable waste near entry point, ticket counter and ECF;
- Organize clean up campaigns together with security units and BZUC to collect plastics, glass, paper, and metal;
- Prepare a common sanitation guideline to make hotel, lodge, homestay and restaurant to make them adopt minimum standards;
- Provide water potable drinking water supply to the visitors in all the entry gates; and
- Support eco-clubs to organize clean-up campaign regularly.

## Chapter X

### 10 Buffer Zone Management

#### 10.1 Introduction

To ensure people's participation in conservation, the fourth amendment of the NPWC Act, 2029 brought forth the concept of BZ management in 2052 BS. BZ is an area surrounding a Park or a Reserve encompassing forests, agricultural lands, settlements, village open spaces and any other land use. The BZ programme in Nepal is a major strategy to protect the core area through community-based natural resource management in its periphery. The NPWC Act, 2029 (Fourth amendment in 2049 BS), Buffer Zone Regulations 2052 (1996) and Buffer Zone Guidelines 2056 (1999), provide policy and legal framework for BZ management programme.

The BZ of PNP was declared on Ashad 03, 2062 (June 27, 2005) with an area of 285.3 sq. km, covering 3 districts which is Makwanpur (Hetauda Sub metropolitan City and Manahari Rural Municipality), Bara (Jitpur-Simra Sub metropolitan City), and Parsa (Thori Rural Municipality). Nearly two-third area of the BZ (67%) falls in Makwanpur, followed by Bara (21%) and Parsa (12%). The boundaries of the rural municipalities and sub-metropolitan city or wards included within the BZ serve as BZ boundary (Figure 14). PNP has institutionalized mechanisms in BZ to mobilize funds, minimize biotic pressures on the Park resources and motivate communities in the participatory management of forest resources to fulfil their needs of forest products.

There are large numbers of settlement in the BZ. The Park encounters heavy biotic pressure from the peripheral villages. The BZ of PNP comprises the population of over 85000 spreading over 2 Sub Metropolitan City, 3 Rural Municipality of 3 districts (Figure 14). The BZ communities are the principal stakeholders. The occupation of the majority of people is agriculture followed by livestock husbandry and they are highly dependent on forest resources. Other people are engaged in tourism, service, business and so on. Main castes of the BZ comprise of Brahmin, Chhetri, Tamang, Magar, Tharu, Chepang, Dalit, Newar, Yadav, Rai, Gurung and Muslim etc.

Table 5: Bufferzone at a glance

|                                         |                                               |
|-----------------------------------------|-----------------------------------------------|
| Initiation of Park and People Programme | 1994                                          |
| Declaration year of BZ                  | 2062 BS (2005)                                |
| Area of BZ                              | 285.3 km <sup>2</sup>                         |
| Districts included in the BZ            | Makawanpur (67%), Bara (21%), and Parsa (12%) |
| Number of Buffer Zone User Committees   | 13                                            |
| Number of Buffer Zone User Groups       | 415                                           |
| Number of Buffer CFUGs                  | 46                                            |
| Major Ethnic Groups                     | Chhetri Brahmin, Tamang, Dalit, Magar, Rai,   |

|                      |                                                                                                                                                            |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                      | Gurung, Tharu, Chepang, and Newar                                                                                                                          |
| No. of BZ Households | 13,604                                                                                                                                                     |
| BZ Population        | 80,413                                                                                                                                                     |
| Local level          | Makwanpur (Hetauda Sub metropolitan City and Manahari Rural Municipality), Bara (Jitpur-Simra Sub metropolitan City), and Parsa (Thori Rural Municipality) |

Most of the BZ community are dependent on subsistence farming such as rice, maize and vegetables. The local people are still dependent on Park resources and forests outside PA for firewood, fodder and grazing. Majority of the old generation are still practicing the conventional system for living whereas the younger generation has diversified their way of life engaging in tourism, employment and other income generation activities with the change of time.

The long-term objective of BZ programme is to motivate local people and to win their support to involve them in nature and wildlife conservation. The legislation has made a provision of channeling 30-50% of the Park revenue to the communities for the implementation of conservation and community development programme. BZ programme are aimed at institutional development (social capital), alternative natural resource development (natural capital), capacity/skill building (human capital), financial management (financial capital), conservation education and awareness, gender and special target group mainstreaming. In fact, BZ programme is a benefit sharing mechanism which involves sustainable development, landscape level conservation, tourism promotion and reconciliation of Park-people conflict. The BZ management programme also provides relief to the victims of wildlife, flood and other natural disasters. The proposed activity and budget for the BZ management is in Annex V.

The BZ of PNP receives around 50% of the revenue generated by Park for conservation and socio-economic development. The government has ploughed back NRs. 182,657,181.87 so far since FY 2075/76 to FY 2078/79 for implementing various programme in the BZ. (APR PNP, 2078/79). The BZMC, the BZUCs and BZUGs have to allocate 30% of their budget for conservation, 30% for community development, 20% for income generation and skill development, 10% for conservation education and 10% administration.

One of the major programme of the BZ management is to develop alternative forest resources in the BZ through community forestry. Thus, BZ programme emphasizes sustainable management and development of the forests by involving local communities as forest user groups. The programme has been very successful with regard to forest resource development and habitat protection in the BZ and community participation in conservation. Before the implementation of the BZ programme, most of these forests were highly degraded. The BZ forests not only provide

forest resources to the community but also secure additional habitats to the wild animals; alternative sites for the tourism and income for community development.

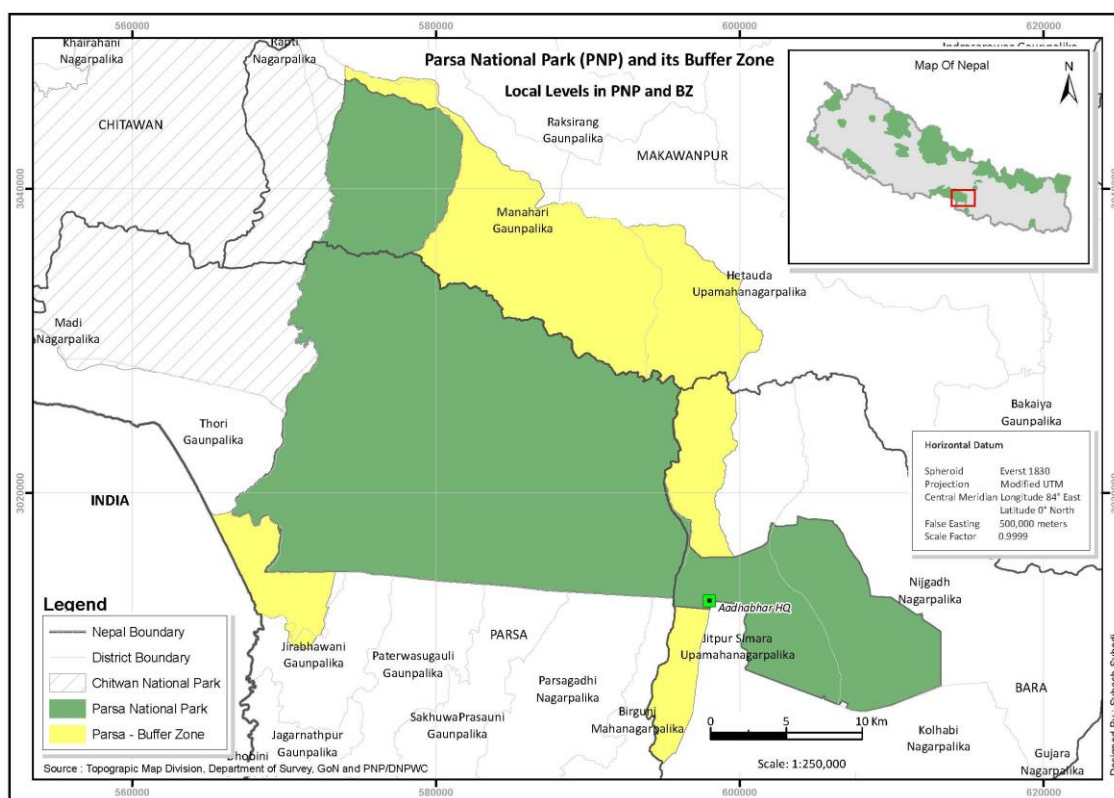


Figure 14: Administrative boundary and BZ area

## Administration and Organization

The BZMC is the BZ's apex body, with an elected body of members representing chairpersons of BZUCs. There are 415 BZUGs at grassroot level. live in the BZ. At the unit level, BZUGs are further federated to form 13 BZUC. Aside from that, community forests, cooperatives and CBAPUs operate under the BZUCs as a functional unit. The BZ secretariat lies within the premises of Park headquarters for coordination and facilitation of overall BZ development and management programme.

## 10.2 Past and Present Management Practices

In the past, management of buffer aone was more focused on conservation, community development, management of human wildlife conflict, tourism development and institutional strengthening of BZ institutions with the financial and technical supports from bilateral and multilateral donors.

At present, BZ management is primarily led by BZ Management Unit of the Park. One ACO is assigned and is responsible to look after overall BZ management activities in close coordination

with BZMC. with the provision of officer assistant. The BZMC meets on a regular basis to review buffer zone management activities. BZMC is also responsible to prepare annual plan to utilize upto 50% of the Park revenue ploughed back for BZ development.

All UGs prepare their annual? plans with broader consensus, which is then combined to form the BZUC plan. The plan prepared through the participatory bottom-up planning process is approved by BZUC and submitted to BZMC. Prior to approval, BZMC reviews the plan. refines it aligning the activities that will be supported by other line agencies. Upon the approval of plan by BZMC meeting, the budget of each BZUCs is released. Account keeping follows Government's financial policy and norms. The BZUCs implement the programme and submit financial reports to the Park through BZMC. One of the important activities of BZMC is to support BZUCs and wildlife victims in assisting relief delivery mechanism. BZMC also coordinates with local governments to pool the resources for community development activities. BZMC also develops BZ five-year management plan in close coordination with the Park. BZ five-year plan along with PNP management plan is approved by DNPWC.

### **10.2.1 Forest Management**

The forest in the BZCF is very important because it serves as a corridor and connectivity area for wildlife habitats. The BZ has a total of 17,502 ha (61% in Makwanpur, 36% in Bara and 3% in Parsa districts). The forest in the BZ is managed under different forest management regimes such as BZ community forests, BZ leasehold forests and BZ religious forests. Efforts have also been made to promote private forests.

At PNP BZ has 46 BZCFs (10,195.83 ha), 61 leasehold forests, and 2 religious forests. A total of 13,604 hhs (80,413 people) are benefitted from community forests (APR PNP 2078/79). The BZ Unit looks after overall management of BZCF ranging from formation of BZCFs and their renewal, formulation and approval of CFOP, verifying the allowable harvest as per the CFOP, marking of the trees to cut and all BZCF related trainings. There is no provision of leasehold forest in BZ Rules 2052, therefore, leasehold forests have to be handed over as BZCF after proper orientation and training.

### **10.2.2 Other land use**

The other land uses in BZ are human settlements, agricultural lands, and public lands. The land cover in the BZ include 55% forest, 30% agriculture land, and 5% grassland, shrub land, pond, and water bodies (Figure 15 and Annex IX). Major development changes in the BZ include emergence of few market places and small towns motorable roads and extension of power transmission lines. are Since the BZ programme of the Park has very limited budget, the support from Agriculture Knowledge Centre (AKC), Agriculture section of municipalities, Veterinary Hospital and Livestock Service Expert Centre (VHLSEC) has to be sought for the input and services in the agriculture and livestock sectors.

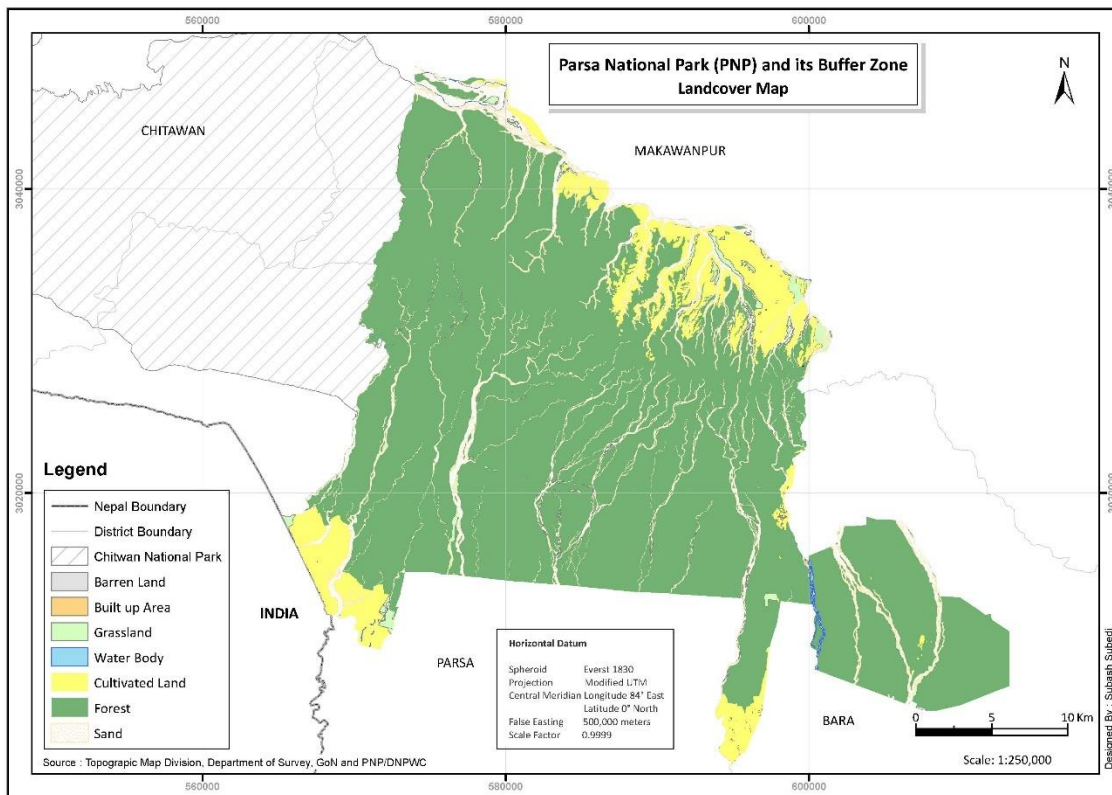


Figure 15: Land cover map of PNP and BZ

### 10.3 Management Issues, Strategies and Activities

#### Issues

- Encroachment in the BZ disrupts ecological connectivity, degrade habitats, and compromise conservation efforts;
- Large population, poverty, and lack of alternative livelihood options create dependency on forest resources leading to human wildlife conflict;
- Human-wildlife conflict arising from the increased wildlife population in the Park;
- Limited and unequal distribution of benefits incurred from tourism;
- High demand of river materials including sand boulder and gravel to meet the requirement for growing development activities, development works of local Government; and
- Women, and other socially and economically marginalized people are still beyond the reach of conservation benefits.

#### Strategies

- Strengthening and institutionalization of BZ institutions including BZCF;
- Adopt gender and social inclusion in the formation of BZ institutions, imparting training and benefit sharing;

- Addressing human-wildlife conflict by promoting semi RCC mesh wire fence including solar/electric to reduce crop raiding by wildlife;
- Deliver relief fund effectively to maintain Park-people amity;
- Promote sustainable use of river resources in order to minimize erosion, landslides and flash floods due to anthropogenic reason;
- Bring the community of Ratanpuri area in BZ system to allow them to use forest resource from BZ forest and access to use the river resources;
- Develop and implement livelihood support programs to address the socio-economic needs of local communities;
- Focus target group to uplift their socio-economic condition adopting National Gender and Social Inclusion Strategy while developing plans and programme;
- Promote Community-based eco-tourism in such a way that tourism will benefit to poorest of poor people;
- Ensure equitable sharing while using the BZ resources;
- Adopt communication, education and public awareness among local community and stakeholders to increase conservation awareness; and
- Foster collaboration and partnerships with conservation partners and local level to access technical expertise, financial resources, and best practices.

### **10.3.1 Zonation**

The area of the BZ is duly notified and clearly delineated. For management purpose, BZ will be further divided into conservation zone, sustainable use zone and intensive use zone.

#### **10.3.1.1 Conservation Zone**

Conservation use zone is the areas which are not handed over as BZCF such as those near Kamini Daha. These areas are excellent as core areas for wildlife habitat and also termed as red division where only conservation activities are allowed. Thus, these areas are managed primarily as extended wildlife habitat, with extraction of forest products restricted but the area open to regulated tourism activities as needed.

#### **10.3.1.2 Sustainable Use Zone**

It is forested area in BZ which is handed over as BZCF, also termed as green division, and managed by community for dual purpose of meeting the need of forest products for the households and providing refuge for dispersed wildlife. In addition, the area is managed for regulated tourism activities. This zone also includes the river segments where regulated extraction of sand, gravel and stone, and fishing can be allowed.

#### **10.3.1.3 Intensive Use Zone**

This is the area in the BZ including all the settlements and private lands where environment-friendly development activities is carried out, also called as yellow division, to enhance the livelihood of the people living in the area through various developmental inputs. The basic objective of this zone is to reduce the dependency of these people on forest resources and garner their support in conservation through conservation awareness. The area under this zone is again prioritized based on severity of the interface problem, dependency of people on forest resources and well-being status of people. Based on this priority, the developmental inputs will be provided.

#### **10.3.2 Biodiversity Conservation**

One of the major objectives to bring the concept of BZ management is to develop partnership between the Park and the people in biodiversity conservation. The involvement and active participation of local people is the main thrust of biodiversity conservation. People are made aware of biodiversity conservation and several programme will be launched focusing on different aspects of biodiversity conservation. Major source of budget for biodiversity conservation in BZ will be available from the fund of BZ management where there is the provision of a 30% budget to be spent in conservation activities.

#### **10.3.3 Community Development**

A wide range of income generation and skill development activities proposed by this plan will be implemented to reduce poverty and improve local people's economic conditions with special focus on women, poor, socially excluded, forest dependent, marginalized communities. Because majority of the local people rely on agriculture and livestock for a living, income generation activities will primarily focus on diversifying agriculture and livestock programs. These diversification initiatives will also improve the adaptive capacity of local communities climate induced disaster prone areas. Similarly, skill-based jobs with a market in rural areas will be identified, and training will be provided to locals so that they can work for themselves.

#### **10.3.4 Income generation and skill development**

Income generation and skill development activities have been identified as an important component of the BZ program to reduce poverty and improve local people's economic conditions. The activities aimed at generating income and developing skills will be directed toward the poor, women, socially excluded, and marginalized communities. Because the majority of the local people rely on agriculture and livestock for a living, income generation activities will primarily focus on diversifying agriculture and livestock programs. These diversification initiatives will also improve the adaptive capacity of local communities in flood-prone areas. Similarly, skill-based jobs with a market in rural areas will be identified, and training will be provided to locals so that they can work for themselves.

### **10.3.5 Capacity building**

The capacity development program will focus to improve executive committee members' knowledge, attitudes, skills, capacity for building public relation and networking, and tools for planning, managing, monitoring BZ programs. Other areas in capacity building include leadership development, account keeping, record keeping, office management, participatory planning, monitoring, and evaluation.

### **10.3.6 Conservation Education**

Conservation education is important for a variety of reasons, including the promotion of sustainable development and the conservation of irreplaceable natural resources and vulnerable plant and animal species. Conservation awareness primarily serves as an educational tool, assisting locals in understanding the economic, aesthetic, and biological importance of preserving resources and reducing or eliminating the negative effects of man-made changes. Conservation education or awareness helps people understand the consequences of human activities on various lands and identifies corrective measures.

Several awareness-raising activities will be carried out, focusing on various segments of society, such as BZ communities, eco-clubs, mother groups, and social activists, in order to raise awareness about participatory biodiversity conservation and develop a positive attitude toward the Park. Activities will include commemorating conservation days, organizing a rally, a radio program, exchange visits, and a school-level environmental program.

### **10.3.7 Tourism promotion**

Although PNP's BZ has tourism potential, there are currently only a few tourism activities. A few hotels, lodges, and home stays have recently opened their doors to visitors. To promote community-based eco-tourism in BZ as a means of generating sustainable income for the people of BZ. Tourism products will be diverse, and additional potential areas will be investigated. The issues, potential and strategies for tourism in the Park as well as in the BZ have been presented in chapter VIII of this management plan.

### **10.3.8 Conflict Minimization**

The reduction of human-wildlife conflict is of primary importance to ensure the cordial relation between the Park and people. Human-wildlife conflict is not a pronounced issue in the BZ of PNP. However, there are few reported cases of wildlife damage to properties by wild elephants, crop damage by ungulates and livestock depredation by predators in the BZ. Relief funds will be delivered effectively and efficiently depending on the nature of incidents, as per the Relief Guideline 2069. Necessary provision will be made to provide instant support to medical

treatment for the injured people through concerned BZUC and shorten the procedure of providing relief amount to the victim as early as possible.

### **10.3.9 Regulation of BZ resources**

#### **10.3.9.1 Management of forest products**

The BZCF is handed over by PNP after the CFOP is approved following BZ management Rules 2052 (1996). CFOPs have to be revised after every five or ten years. The users of the BZCF can utilize fuelwood and timber for their own use according to the CFOP. Management of forest product in Nirmalbasti and Thori area is an issue as there is very small areas of forest in the BZ. Similarly, the use of forest resources by the community in the extended area is also an issue as BZ is yet to be declared there. To resolve this issue, an adhoc BZUC will be established and proposed BZCF will be formed so that people there can benefit.

Windthrows or wildfall trees will be stacked and used as per the provision mentioned in CFOP. If the quantity exceeds AAC mentioned in the CFOP, additional quantity of timber will be distributed among disaster victim households upon recommendation from District Disaster Management Committee (DDMC). The driftwood collected in the buffer zone will be managed according to the provision made in BZ Management Rules 2052. The driftwood thus collected can also be provided to the victim of disaster upon the decision made by DDMC under District Administration Office (DAO). Permission is granted to fell and use the trees grown in the private lands following a certain process.

#### **10.3.9.2 Management of Sand, Gravel and Stone**

Rivers are a key source of ecosystem services such as water, food, energy, riverbed materials, etc. (Postel and Thompson 2005; Rasul 2014). Within those ecosystem services, the extraction of river bed material is one of particularly important types of human activity in river ecosystems (Gregory 2006; Wohl 2006). Sand, stone and gravel extraction has been an environmental problem around the globe in recent years (Musah and Barkarson 2009). The haphazard extraction of riverbed materials directly alters the channel geometry and bed elevation. By removing riverbed materials from the river using an excavator and digging deep holes disrupts the preexisting balance between sediment supply and transporting capacity, typically inducing incision upstream and downstream of the extraction site (Huang et al. 2014). As a result, the frequency of floodplain inundation increases, invites flash floods, and frequently leads to destruction of bridges and channelization structures. It also results in the loss or impoverishment of aquatic and riparian habitats (Monfared 2008).

In Nepal, the riverbed materials such as sand, gravel and stones are one of the major sources for the construction of roads, buildings and other purposes. An increase in demand for sand and gravel has placed immense pressure on these riverbed materials. The extraction of these three important construction aggregates is bound to have considerable negative effect on the place

where they occur. Therefore, the excavation should not negatively affect the prime habitats of aquatic species. In the core area of Park, extraction of riverbed materials is prohibited by NPWC Act, 2029 for which EIA has to be undertaken as per Environment Act 2076 and its Regulation 2076. However, in the BZ the authority to regulate and manage riverbed material is given to PA.

The Local Government Operation Act (LGOA), 2074 allows Municipality and Rural Municipality to manage sand, gravel and stone in their area. Similarly, the government has issued 'Standard on Extraction, Sale and Management of Stones, Pebbles and Sand 2077' and according to the standard, the local Government can use river resources only outside of the forest, Chure and PA. The standard also aims to determine practical procedures to be adopted by rural municipalities and municipalities in exercising the power to sell stones, pebbles, sand and soil. As per the standard, local levels shall extract and collect river and mine-based products from the areas as specified in the approved environmental study report. The standards enshrined in the Environmental Protection Act, 2076, and Environment Protection Regulation, 2077 and relevant legislation should be adhered to while executing the excavation related activities.

The excavation and use of sand, stone and gravel in BZ is provided to local people in regulated ways for their own purpose other than commercial. Regulated excavation of such products from rivers is allowed to the BZ communities, through BZUCs, only after paying royalty. These excavation activities are prohibited in areas where it could affect habitat, breeding and mobility of aquatic life. Besides this, the excavation is limited to certain months and allowed only in designated river sections. Excavation should be in a small scale more closely to the existing annual allowable quantity. Regular monitoring, supervision and relevant studies are necessary to take right decisions in this matter. In any case, transportation and use of sand, stone and gravel should not be extended outside the BZ. River based materials will also be allowed for infrastructure or community development works of federal, provincial and local government with proper coordination with PNP following Park procedure after payment of certain royalty. The quantity of such materials should adhere within the allowable quantity estimated in the management plan. Similarly, the river-based materials can also be given to the victims of disaster upon the recommendation of DDMC. However, permission of grant of river-based materials has to be approved by DNPWC. But again, the quantity should be within the allowable quantity. The river-based materials for development works of local level outside of the BZ can also be provided if the river-based materials could not be received from other rivers only after getting permission from DNPWC. However, for this, a separate environment study has to be undertaken. The use of mechanized equipment to collect river materials could be made available subject to the Park's permission and the IEE report.

For this, the BZUC will prepare their management plan with the support of technical staff of PNP including the management of natural resources in the BZ. BZUC plans the use of resources in such a way that it will not affect biodiversity conservation. The total quantity of river

materials (sand, stone and gravel) that can be collected from the rivers and streams of PNP border and BZ for the period of five years (2080/81-2084/85) is presented in Annex XIII. Each BZUC will have to extract 40% sand, 40% gravel and 20% stone from the allowable estimate. However, some of the BZUC might not have all the three resources and therefore might have to be adjusted accordingly. The quantity of the river resources to be extracted for each year can be revised at any point of time (year) if it is not extracted equally every year.

A total of about 16545 m<sup>3</sup> of stone 4209 m<sup>3</sup> gravel and 9680 m<sup>3</sup> sand were extracted in FY 079/80 BS from the rivers and streams of BZ for different developmental activities (road, buildings, culverts/bridges, etc.).

### **10.3.10 Activities**

- Support 46 BZCFs to renew their OPs;
- Handover additional 5 BZCFs to fulfill the demand of fuel, fodder and timber;
- Organize BZCFs management trainings;
- Restore degraded forests in the BZ/national forests and CFs in BZ by artificial or natural regeneration;
- Support local community to operate 3 private nurseries;
- Provide seedlings and organize plantation in the corridor, roadside, river banks, public and private land;
- Support fruit tree plantation and alternative cropping to reduce the wildlife attractions in the agricultural field;
- Implement Churia conservation program in BZ to mitigate impacts of flash floods and landslides;
- Provide support to install Improved Cook Stove (ICS) to 100 HHs of marginalized communities;
- Undertake river training work in the BZ by embankment protection;
- Provide support to repair and maintenance of forest road in the BZ;
- Construction of culvert and cause way in the BZ;
- Construction 5 sub surface water (sub well) harvesting dam in BZ;
- Pilot rain water harvesting program in selected Churia region to address water stress and extended dry spells;
- Prepare livelihood improvement strategy and plan for the BZ;
- Provide support to bee keeping to deter wild elephant;
- Conduct high value agriculture crops (not preferred by wildlife) farming training;
- Provide support to procure 15 improved animal breed to reduce number of unproductive domestic animals;
- Support farmers in adopting climate-smart agricultural practices that improve productivity, conserve water,

- Support to rescue and manage wildlife in BZ;
- Provide leadership training to Chairperson and Vice Chairperson of BZUG and BZUC;
- Provide account keeping training to Secretary or Treasurer;
- Provide support to organize cooperative management training;
- Carry out financial management training;
- Participatory planning and monitoring training;
- Regulation of relief fund for victims of human wildlife conflict;
- Award distribution to best UG/UC;
- Support CBAPU for mobilization;
- Organize sensitization programme in the BZ to restore and manage wetlands in the corridors and other potential tiger habitats;
- Learning Visit of PNP staff and BZUC members;
- Educational tour of Eco-club members to learn importance of biodiversity conservation;
- Form, strengthen then and mobilize Eco-clubs in clean-up campaigns, awareness and capacity building events and plantation initiatives;
- Support 'Eco-clubs' to implement school level conservation awareness activities;
- Conduct conservation awareness campaign at school and villages of BZ with conservation focused cultural show, street drama, concert, documentary show, etc.;
- Implement ToT for the teachers of schools of BZ on biodiversity conservation;
- Produce Information Education and Communication (IEC) material;
- Provide support to strengthen and institutionalize CBAPU;
- Orientation training regarding conservation legislation to BZ communities;
- Celebrate various conservation days (World Environment Day – June 5, International Biodiversity Day – May 22, World Wetlands Day – February 2, Tiger day-July 29) and Wildlife Week-Baisakh from 1 to 7, World Wildlife Day – March 03, CBAPU Day March 04 etc.);
- Produce monthly radio documentary of BZ programme;
- Produce video documentary focusing BZ programme;
- Organize sharing meeting with the mayors of the municipalities of BZ;
- Organize BZMC meetings;
- Provide support day to day operation of administrative business; and
- Support BZUC to prepare five-year plan.

## Chapter XI

### 11 Activity, Budget and Logical Framework

#### 11.1 Activity and Budget

The total budget required for the implementation of the activities prescribed by this plan for the period of five years is estimated at NRs. 1,196,358,000 (One billion one hundred ninety-six million three hundred fifty-eight thousand only) and the detail breakdown is presented in Annex VII. Of the total budget, 77% will be spent to cover program implementation cost and 23% for administrative cost. The summary of the activities and budget of the management plan 2080÷81-2084÷85 (2023/2024-2027/2028) for PNP and its BZ for the period of five years is presented in Table 4. It gives much weightage Park protection followed by habitat management and BZ which are around 18%, 11 % and 11% respectively. The next priority is given to Species conservation, Tourism development, Research, monitoring and capacity building and Wildlife health management, and Human wildlife conflict which are about 8 %, 7%, 5%, 4% and 4% respectively (Table 5).

Table 6: Activity and Budget of Management Plan

(Amount in Thousand Rupees)

| SN | Activities                                 | 1st Year      | 2nd Year      | 3rd Year      | 4th Year      | 5th Year      | Total Amount   | %             |
|----|--------------------------------------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|
| 1  | Park protection                            | 36927         | 48834         | 48422         | 40249         | 40536         | 214967         | 17.97         |
| 2  | Habitat management                         | 23705         | 25363         | 25416         | 26916         | 28446         | 129845         | 10.85         |
| 3  | Fire control                               | 3100          | 3005          | 2885          | 3853          | 3720          | 16563          | 1.38          |
| 4  | Wildlife health management                 | 8600          | 7330          | 11559         | 12387         | 7528          | 47404          | 3.96          |
| 5  | Encroachment control                       | 6775          | 7114          | 7453          | 7791          | 8130          | 37263          | 3.11          |
| 6  | Human wildlife conflict                    | 8500          | 7350          | 9350          | 8050          | 11460         | 44710          | 3.74          |
|    | Elephant care facility management          | 10600         | 8505          | 6396          | 1788          | 1869          | 29158          | 2.44          |
| 7  | Research, monitoring and capacity building | 11767         | 12568         | 10490         | 11784         | 14210         | 60818          | 5.08          |
| 8  | Species Conservation                       | 18860         | 19228         | 18546         | 22322         | 19182         | 98138          | 8.20          |
| 9  | Tourism                                    | 28883         | 17259         | 12786         | 14192         | 10199         | 83319          | 6.96          |
| 10 | Climate Change and Solid Waste Management  | 6350          | 6668          | 6047          | 7593          | 7248          | 33905          | 2.83          |
| 11 | Buffer Zone                                | 23835         | 23504         | 25474         | 25570         | 27906         | 126289         | 10.56         |
| 12 | Administrative Expenses                    | 49969         | 52467         | 54754         | 57252         | 59538         | 273981         | 22.90         |
|    | <b>Total</b>                               | <b>237870</b> | <b>239194</b> | <b>239577</b> | <b>239745</b> | <b>239972</b> | <b>1196358</b> | <b>100.00</b> |

The budget available for PNP in FY 2079/80 is NRs. 136,082,000 (One hundred thirty-six million eighty-two thousand) that includes NRs. 45,724,000 (Forty-five million seven hundred twenty four thousand) as administrative budget (Salary, ration, uniform and travel allowance). Similarly, the conservation partners such as Zoological Society of London (ZSL), National Trust for Nature Conservation (NTNC) and others have spent around NRs. 9,000,000.00 (NRs. Nine million) in implementing conservation activities in the Park and BZ. Taking the budget allocation of FY 2079/80 as base allocation for FY 2080/81 as well and it is increased by 5% for the second year and then increased by 2.5% every year from third year, the allocation is estimated for the five fiscal years. With this estimation, the Government allocation budget for the plan is around 65.43% (Table 7). It is expected that BZUCs will tap the resources from local Government and conservation partners will contribute more to fulfill the deficit of 34.57%. With the implementation of the plan it is expected that it will generate 218157 person days of local employment.

Table 7: Estimated cost of the plan and available budget for PNP (NRs. In thousand)

| Description                                                    | Budget        |               |               |               |               |         |
|----------------------------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------|
|                                                                | FY<br>2079/80 | FY<br>2080/81 | FY<br>2081/82 | FY<br>2082/83 | FY<br>2083/84 | Total   |
| Cost of the management plan                                    | 365535        | 388805        | 402592        | 405794        | 427039        | 1989765 |
| Total allocation in PNP by<br>GoN and Conservation<br>Partners | 245657        | 257939        | 257939        | 270222        | 270222        | 1301980 |
| <b>Total allocation in percent</b>                             | 67.20         | 66.34         | 64.07         | 66.59         | 63.28         |         |
| <b>Average allocation in percent</b>                           | <b>65.43</b>  |               |               |               |               |         |

## 11.2 Logical Framework Analysis

The logical framework of PNP and its BZ Management Plan for five years period 2080/81-2084/85 (2023/24-2027/28) is presented in Table 8.

Table 8: Log frame of PNP management plan

| Narrative Summary                                                                                                                                    | Objectively Verifiable Indicators (OVI)                                                                                                                                          | Means of Verification                                                                                                                                          |                                           |
|------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| <b>Goal</b>                                                                                                                                          |                                                                                                                                                                                  |                                                                                                                                                                |                                           |
| To conserve biological diversity of the Park with special focus on protected wildlife species including wild elephant and tiger through restoration, | <ul style="list-style-type: none"> <li>Enhanced diversity richness and status of endangered species,</li> <li>Increased value of PNP and BZ,</li> <li>Improved living</li> </ul> | <ul style="list-style-type: none"> <li>Species inventory reports (National and Park level)</li> <li>Annual progress Report</li> <li>Progress Report</li> </ul> | Supportive policy and priority of the GoN |

|                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                            |                                                                                                                           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| improvement and management of wildlife habitat and contribute towards prosperity of local people                                                                                                           | standard of local community                                                                                                                                                                                                                                                                                                                                                                                    | of conservation partners <ul style="list-style-type: none"> <li>• Human Development Index reports</li> <li>• Living standard survey reports</li> <li>• Study Reports and Research Papers</li> </ul>                                                                                                                                        |                                                                                                                           |
| <b>Purpose</b>                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                            |                                                                                                                           |
| To protect rare, endangered and threatened wildlife with special focus to protected species mainly Wild elephant, tigers, Gaur bison, Four horn antelope, and rhino with appropriate protection strategies | <ul style="list-style-type: none"> <li>• Enhanced diversity richness and status of endangered species, increased</li> <li>• Increased number of Wild elephant, tiger and other wildlife,</li> <li>• Reduced number of tiger poaching</li> <li>• Reduced number of illegal cases inside the Park</li> <li>• No. of livestock vaccinated regularly</li> <li>• Connectivity is maintained and improved</li> </ul> | <ul style="list-style-type: none"> <li>• Annual progress Report</li> <li>• Progress Report of conservation partners</li> <li>• Study Reports and Research Papers</li> <li>• GIS mapping of wetlands,</li> <li>• Lab test of water quality of wetlands,</li> <li>• Articles in the newspaper</li> <li>• Documentary</li> <li>• D</li> </ul> | <ul style="list-style-type: none"> <li>• Adequate budget and staff provided to implement management activities</li> </ul> |
| To improve and manage habitat by maintaining wildlife friendly forest grassland mosaic and improve wildlife connectivity to contain wildlife in the Park and BZ forests                                    | <ul style="list-style-type: none"> <li>• Improved habitat for wildlife,</li> <li>• No. of wetland and grassland restored and improved</li> <li>• Ha. of invaded area by AIS is controlled</li> <li>• Increased frequency of tiger sighting</li> <li>• The incidence of fire in the Park is reduced</li> </ul>                                                                                                  | <ul style="list-style-type: none"> <li>• Annual progress Report</li> <li>• Progress Report of conservation partners</li> <li>• Study Reports and Research Papers</li> <li>• Records of poaching incident and illegal wildlife trade</li> <li>• Articles in the newspaper</li> <li>• Documentary</li> </ul>                                 | <ul style="list-style-type: none"> <li>• Adopted climate change mitigation and adaptation measure</li> </ul>              |

|                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                   |                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| To develop tourism infrastructure in order to promote sustainable tourism by involving private entrepreneur so that locals benefit from increased socio-economic opportunities while minimizing and mitigating negative impacts to maintain ecological integrity and cultural heritage | <ul style="list-style-type: none"> <li>• Increased visitors' satisfaction,</li> <li>• Increased employment opportunities</li> <li>• No. of local people involved in tourism-based enterprises,</li> <li>• Increased cultural activities showcased for visitors,</li> <li>• Development of tourism hub in Amlekhgunj and Pratapur</li> </ul> | <ul style="list-style-type: none"> <li>• Progress Reports</li> <li>• Visitors survey reports</li> <li>• Economic survey reports</li> <li>• Media reports</li> <li>• DNPWC reports,</li> </ul>                                                     | Conservation-friendly tourism promotion                                                                        |
| To enhance participatory biodiversity conservation by empowering BZ communities while decreasing the risks of climate vulnerabilities and improving livelihood of local people                                                                                                         | <ul style="list-style-type: none"> <li>• Social and Economic development of local community improved,</li> <li>• Increased participation of local people in conservation activities,</li> <li>• Increased income of Park dependent people;</li> <li>• Conservation communities are strengthened and institutionalized,</li> </ul>           | <ul style="list-style-type: none"> <li>• Annual progress Report</li> <li>• Progress Report of conservation partners</li> <li>• Interview of local people in newspaper, radio and TV</li> <li>• Best Practice and Lesson Learnt Reports</li> </ul> | BZ communities are unified and positive to cooperate with effective coordination, collaboration and networking |
| To maintain human wildlife amity by addressing issues related to HWC                                                                                                                                                                                                                   | <ul style="list-style-type: none"> <li>• Illegal cases have reduced;</li> <li>• Wildlife depredation reduced.</li> <li>• Relief delivery is effective;</li> <li>• Human-wildlife Amity maintained</li> </ul>                                                                                                                                | <ul style="list-style-type: none"> <li>• Annual progress Report</li> <li>• Progress Report of conservation partners</li> <li>• Interview of local people in newspaper, radio and TV</li> </ul>                                                    | Human-Wildlife conflict drastically reduced                                                                    |

| To strengthen institutional capacity of Park and BZ through research, capacity building, coordination and collaboration | <ul style="list-style-type: none"> <li>• Updated database</li> <li>• The PNP staff delivers both technical and management services effectively and efficiently</li> <li>• The delivery of services provided by Conservation committers are improved</li> <li>• Increased joint venture activities, projects and programme</li> </ul> | <ul style="list-style-type: none"> <li>• Annual progress Report</li> <li>• Progress Report of conservation partners</li> <li>• HRD reports</li> <li>• Media reports</li> <li>• DNPWC reports, records of correspondence</li> <li>•</li> </ul> | <ul style="list-style-type: none"> <li>• The staff are not frequently transferred</li> <li>• Staff motivation and moral is maintained high</li> </ul> |
|-------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Activities                                                                                                              |                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                               | Budget                                                                                                                                                |
| Park protection - 5.3.1.4                                                                                               |                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                               | 214967                                                                                                                                                |
| Habitat management – Grassland (5.3.2.1.4) and Wetland (5.3.2.4)                                                        |                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                               | 129845                                                                                                                                                |
| Fire control - 5.3.3.4                                                                                                  |                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                               | 16563                                                                                                                                                 |
| Wildlife health management - 5.3.4.4                                                                                    |                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                               | 47404                                                                                                                                                 |
| Encroachment control - 5.3.5.4                                                                                          |                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                               | 37263                                                                                                                                                 |
| Human wildlife conflict - 5.3.6.4                                                                                       |                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                               | 44710                                                                                                                                                 |
| Elephant care facility management - 5.3.7.4                                                                             |                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                               | 29158                                                                                                                                                 |
| Research, monitoring and capacity building – 6.1, 6.2, 6.3                                                              |                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                               | 60818                                                                                                                                                 |
| Species conservation - 7.1.6-7.2.6, 7.3.6, 7.4.6, 7.5.1                                                                 |                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                               | 98138                                                                                                                                                 |
| Tourism management – 8.2.6                                                                                              |                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                               | 83319                                                                                                                                                 |
| Climate change and Solid waste management – 9.1.4 and 9.2.4                                                             |                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                               | 33905                                                                                                                                                 |
| Buffer Zone management – 10.3.10                                                                                        |                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                               | 126289                                                                                                                                                |
| Administrative expenses -                                                                                               |                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                               | 273981                                                                                                                                                |
| <b>Total</b>                                                                                                            |                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                               | <b>1196358</b>                                                                                                                                        |

### 11.3 Gender Equity and Social Inclusion

Gender inequality and social exclusion are issues of global concern. Over the last decade, the Asia and the Pacific region has made a remarkable progress on these issues. Nepal is not an exception to this regard. Since last decade, it has been moving ahead by fulfilling all commitments made in the international arena towards nondiscrimination, gender equality and social justice. In this regard, PNP needs to better target the delivery of conservation outcomes to the hardest segments of society, those who have been excluded from the development outcomes and those who have been overlooked.

PNP will adopt Gender Equality and Social Inclusion (GESI) strategy as a core cross-cutting theme. The implementation of GESI strategy will be participatory and inclusive as possible. At the program level the focus will be laid to identify whether the program is GESI responsive, embraces inclusive approaches in program appraisal, design, implementation, monitoring and evaluation. In terms of organizational preparedness, building conceptual clarity and operational skills for GESI issues is a common concern for all partners. The management plan will mainstream GESI strategy to engage and empower women and marginalized people in equitable benefit sharing through meaningful participation in participatory biodiversity conservation activities.

#### **11.4 Implementation and Mainstreaming Strategy**

The Park will adopt biodiversity conservation at a landscape approach involving BZ communities in a participatory manner. The BZ institutions will be strengthened and institutionalized in participatory planning, implementation and monitoring. The BZ institution will maintain transparency about their programme to the local community including local Government. The Park will continue to work together with Nepal Army to protect biodiversity by adopting innovative technology in patrolling. Pooling the resources to implement the activities with conservation partners will be one of the key strategies followed by implementation in the ground in partnership approach. The 5% Corporate Social Responsibility (CSR) fund of the private sector in the conservation will be tapped as a biodiversity finance. Similarly, BZ institutions will also coordinate with the local Government to tap the resources to develop infrastructure in the BZ. The Park will adopt a communication strategy to orient legislation related to conservation to local people involving BZ communities and Eco-clubs. The strategy will be taken to involve Universities and Colleges to carry out research and studies in the areas of conservation. The Park will take all possible measures to maintain Park- people amity. In this regard, relief fund will be delivered in an effective manner.

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## **Annexes**

## Annex I: Floral Diversity in PNP

| Dicotyledons |                                 |              |       |                |
|--------------|---------------------------------|--------------|-------|----------------|
| S.N.         | Botanical Name                  | Local Name   | Habit | Family         |
| 1            | <i>Dicliptera bupleuroides</i>  |              | H     | Acanthaceae    |
| 2            | <i>Echinacanthus attenuatus</i> |              | H     |                |
| 3            | <i>Eranthemum pulchellum</i>    | Chitohar     | H     |                |
| 4            | <i>Hygrophila auriculata</i>    | Bakas        | H     |                |
| 5            | <i>Justicaca adhatoda</i>       |              | S     |                |
| 6            | <i>J. procumbens</i>            |              | H     |                |
| 7            | <i>Lepidagathis incurva</i>     |              | H     |                |
| 8            | <i>Thunbergia fragrans</i>      |              | Cl    |                |
| 9            | <i>Achyranthus aspera</i>       | Chirchiri    | H     | Amaranthaceae  |
| 10           | <i>Alternanthera sessilis</i>   |              | H     |                |
| 11           | <i>Amaranthus spinosus</i>      | Kataiya      | H     |                |
| 12           | <i>A. viridis</i>               |              | H     |                |
| 13           | <i>Gomphrena velosoides</i>     |              | H     |                |
| 14           | <i>Rhus javanica</i>            | Bhak amila   | T     | Anacardiaceae  |
| 15           | <i>Semecarpus anacardium</i>    | Bhela        | T     |                |
| 16           | <i>Spondias pinnata</i>         | Amar         | T     |                |
| 17           | <i>Annona reticulata</i>        | Sarifa       | T     | Annonaceae     |
| 18           | <i>Alstonia scholaris</i>       | Chhtaun      | T     | Apocynaceae    |
| 19           | <i>Carrisa carandas</i>         | Karaona      | S     |                |
| 20           | <i>Holarrhena pubescens</i>     | Dudhkoriya   | T     |                |
| 21           | <i>Ichnocarpus frutescens</i>   | Gahumani     | Cl    |                |
| 22           | <i>Rauwolfia serpentina</i>     | Jharbaruwa   | S     |                |
| 23           | <i>Tracheospermum lucidum</i>   | Dudhlati     | Cl    |                |
| 24           | <i>Vallaris solanacea</i>       | Dudhlati     | Cl    |                |
| 25           | <i>Wrightia arborea</i>         | Dudhkhiri    | T     |                |
| 26           | <i>Calotropis gigantea</i>      | Akon         | S     | Asclepiadaceae |
| 27           | <i>C. procera</i>               | Akon         | S     |                |
| 28           | <i>Cryptolepis buchanani</i>    |              | Cl    |                |
| 29           | <i>Ageratum conyzoides</i>      | Rawuna       | H     | Asteraceae     |
| 30           | <i>Artemisia indica</i>         |              | H     |                |
| 31           | <i>Caesulia axillaries</i>      | Thukaha      | H     |                |
| 32           | <i>Conyza Canadensis</i>        |              | H     |                |
| 33           | <i>C. leucantha</i>             | Bantori      | H     |                |
| 34           | <i>Eclipta prostrata</i>        |              | H     |                |
| 35           | <i>Elephantopus scaber</i>      | Khotila khar | H     |                |
| 36           | <i>Eupatorium odoratum</i>      | Banmara      | S     |                |
| 37           | <i>Sonchus wightiana</i>        |              | H     |                |
| 38           | <i>Spilanthus calva</i>         | Pirpire      | H     |                |
| 39           | <i>Tridax procumbens</i>        |              | H     |                |
| 40           | <i>Vernonia squarrosa</i>       |              |       |                |
| 41           | <i>Basella alba</i>             | Poye ke sag  | Cl    | Basellaceae    |
| 42           | <i>Oroxylum indicum</i>         | Totelo       | T     | Bignoniaceae   |

|    |                                 |              |    |                  |
|----|---------------------------------|--------------|----|------------------|
| 43 | <i>Steriospermum personatum</i> | Panar        | T  |                  |
| 44 | <i>Bombax ceiba</i>             | Simal        | T  | Bombaceae        |
| 45 | <i>Cyanoglossum lanceolatum</i> | Kanike       | H  | Boraginaceae     |
| 46 | <i>Heliotropium strigosum</i>   |              | H  |                  |
| 47 | <i>H. species</i>               | Lapta        | H  |                  |
| 48 | <i>Garuga pinnata</i>           | Dabdabe      | T  | Burseraceae      |
| 49 | <i>Cannabis sativa</i>          | Ganja        | H  | Cannabaceae      |
| 50 | <i>Cleome gynandra</i>          |              | H  | Capparaceae      |
| 51 | <i>C. speciosa</i>              |              | H  |                  |
| 52 | <i>C. viscosa</i>               | Hurhur       | H  |                  |
| 53 | <i>Sagina species</i>           |              | H  | Caryophyllaceae  |
| 54 | <i>Celastrus paniculatus</i>    | Pilaphal     | T  | Celastraceae     |
| 55 | <i>Reissantia arborea</i>       | Chatpatia    | Cl |                  |
| 56 | <i>Chenopodium album</i>        | Bathuwa      | H  | Chenopodiaceae   |
| 57 | <i>C. ambrosioides</i>          | Gahuna       | H  |                  |
| 58 | <i>Annogeissus latifolius</i>   | Banjhi       | T  | Combretaceae     |
| 59 | <i>Combretum roxburghii</i>     |              | Cl |                  |
| 60 | <i>Terminalia alata</i>         | Asna/Saj     | T  |                  |
| 61 | <i>T. bellerica</i>             | Barro        | T  |                  |
| 62 | <i>T. chebula</i>               | Harro        | T  |                  |
| 63 | <i>Argyreia argentea</i>        |              | Cl | Convolvulaceae   |
| 64 | <i>A. hookeri</i>               |              | Cl |                  |
| 65 | <i>A. species</i>               |              | Cl |                  |
| 66 | <i>Ipomea aquatica</i>          | Karmi ke sag | Cl |                  |
| 67 | <i>I. muricata</i>              | Gidhawar     | Cl |                  |
| 68 | <i>I. quqmoclit</i>             |              | Cl |                  |
| 69 | <i>Merremia emarginata</i>      | Mamarkhi     | H  |                  |
| 70 | <i>M. hederacea</i>             |              | Cl |                  |
| 71 | <i>Porana paniculata</i>        |              | Cl |                  |
| 72 | <i>Rivea spp.</i>               |              | Cl |                  |
| 73 | <i>Ehretia laevis</i>           |              | T  | Cordiaceae       |
| 74 | <i>Citrullus lanatus</i>        | Gurmi        | Cl | Cucurbitaceae    |
| 75 | <i>Coccinea grandis</i>         | Tilkor       | Cl |                  |
| 76 | <i>Cucumis prophetarum</i>      |              | Cl |                  |
| 77 | <i>Momordica balsamina</i>      | Chathel      | Cl |                  |
| 78 | <i>Mukia maderaspatana</i>      |              | Cl |                  |
| 79 | <i>Cuscuta reflexa</i>          | Akash lati   | Cl | Cuscutaceae      |
| 80 | <i>Dillenia pentagyna</i>       | Dhori/Tatari | T  | Dilleniaceae     |
| 81 | <i>Shorea robusta</i>           | Sal/ Sakhuwa | T  | Dipterocarpaceae |
| 82 | <i>Arachne cordifolia</i>       |              | S  | Euphorbiaceae    |
| 83 | <i>Antidesma acidum</i>         | Banmusri     | T  |                  |
| 84 | <i>Bridelia stipularis</i>      | Khaji        | S  |                  |
| 85 | <i>Croton bonplandiannus</i>    | Mirchaira    | H  |                  |
| 86 | <i>C. roxburghii</i>            | Mahson       | T  |                  |
| 87 | <i>Euphorbia hirta</i>          | Dudhiya      | H  |                  |

|     |                               |                |    |          |
|-----|-------------------------------|----------------|----|----------|
| 88  | <i>E. proatrata</i>           | Dudhiya        | H  |          |
| 89  | <i>Jatropha gossypifolia</i>  | Bangrera       | S  |          |
| 90  | <i>J. curcas</i>              | Bangrera       | S  |          |
| 91  | <i>Macaranga denticulate</i>  | Marar          | T  |          |
| 92  | <i>Mallotus phillippensis</i> | Sindure        | T  |          |
| 93  | <i>Phyllanthus amarus</i>     |                | H  |          |
| 94  | <i>P. emblica</i>             | Amla           | T  |          |
| 95  | <i>P. reticulatus</i>         | Sikat          | S  |          |
| 96  | <i>Ricinus communis</i>       | Arari          | T  |          |
| 97  | <i>Trewia nudiflora</i>       | Bhilor         | T  |          |
| 98  | <i>Abrus precatorius</i>      | Karjani        | Cl | Fabaceae |
| 99  | <i>A. pulchellus</i>          |                | Cl |          |
| 100 | <i>Acacia caechu</i>          | Khair          | T  |          |
| 101 | <i>A. rugata</i>              | Sikakai        | T  |          |
| 102 | <i>Albizia gamblei</i>        | Siris          | T  |          |
| 103 | <i>A. lucidior</i>            |                | T  |          |
| 104 | <i>A. procera</i>             |                | T  |          |
| 105 | <i>Alysicarpus vaginalis</i>  |                | H  |          |
| 106 | <i>Atylosia scarabaeoides</i> |                | Cl |          |
| 107 | <i>A. volubilis</i>           | Jangali sem    | Cl |          |
| 108 | <i>Baauhinia malabarica</i>   | Amilo          | T  |          |
| 109 | <i>B. purpurea</i>            | Koilar         | T  |          |
| 110 | <i>B. vahlii</i>              | Malhon/ Bhorla | Cl |          |
| 111 | <i>Butea monosperma</i>       | Paras          | T  |          |
| 112 | <i>Caeslpinia bonduc</i>      | Tairi          | S  |          |
| 113 | <i>C. cucullata</i>           |                | S  |          |
| 114 | <i>C. decapitala</i>          |                | S  |          |
| 115 | <i>Cassia fistula</i>         | Rajbriksah     | T  |          |
| 116 | <i>C. occidentalis</i>        | Chakor         | S  |          |
| 117 | <i>C. tora</i>                | Chakor         | S  |          |
| 118 | <i>Crotolaria alata</i>       | Jhunjhuna      | H  |          |
| 119 | <i>C. albida</i>              |                | H  |          |
| 120 | <i>C. calycina</i>            |                | H  |          |
| 121 | <i>C. pallida</i>             |                | H  |          |
| 122 | <i>C. prostrata</i>           |                | H  |          |
| 123 | <i>C. spectabilis</i>         |                | H  |          |
| 124 | <i>C. tetragona</i>           | Sanethi        | S  |          |
| 125 | <i>Dalbergia latifolia</i>    | Satisal        | T  |          |
| 126 | <i>D. sissoo</i>              | Sisau          | T  |          |
| 127 | <i>D. volubilis</i>           |                | S  |          |
| 128 | <i>Desmodium species</i>      |                | H  |          |
| 129 | <i>D. heterocarpon</i>        |                | H  |          |
| 130 | <i>D. laxiflorum</i>          | Kuro           | H  |          |
| 131 | <i>D. oojeinense</i>          | Panna          | T  |          |
| 132 | <i>D. triflorum</i>           |                | H  |          |
| 133 | <i>D. velutinum</i>           |                | H  |          |

|     |                                   |               |    |                |
|-----|-----------------------------------|---------------|----|----------------|
| 134 | <i>Erythrina stricta</i>          |               | T  |                |
| 135 | <i>Flemengia macrophylla</i>      |               | S  |                |
| 136 | <i>F. strbilifera</i>             |               | H  |                |
| 137 | <i>Indigofera hirsuta</i>         |               | S  |                |
| 138 | <i>I. pulchella</i>               |               | S  |                |
| 139 | <i>Milletia extensa</i>           | Bhanbhaniya   | S  |                |
| 140 | <i>M. fruticosa</i>               |               | S  |                |
| 141 | <i>Mimosa pudica</i>              | Lajjaune jhar | S  |                |
| 142 | <i>M. rubicaulis</i>              | Arar          | S  |                |
| 143 | <i>Mucuna pruriens</i>            | Kabachhua     | Cl |                |
| 144 | <i>Phyllodium pulchellum</i>      | Kanani        | S  |                |
| 145 | <i>Pongamia glabra</i>            | Karuyaini     | T  |                |
| 146 | <i>Saraca asoca</i>               | Ashok         | T  |                |
| 147 | <i>Smithia sensitive</i>          |               | H  |                |
| 148 | <i>Tamarandus indica</i>          | Imli          | T  |                |
| 149 | <i>Uraria lagapidiodes</i>        |               | H  |                |
| 150 | <i>U. lagopus</i>                 |               | H  |                |
| 151 | <i>Swertia angustifolia</i>       | Chiraita      | H  | Gentianaceae   |
| 152 | <i>Coleibrookia oppositifolia</i> | Dhurselo      | S  | Lamiaceae      |
| 153 | <i>Hyptis suaveolens</i>          | Bantulsi      | H  |                |
| 154 | <i>Leonotis nepetaefolia</i>      |               | H  |                |
| 155 | <i>Leonurus japonicus</i>         | Guma          | S  |                |
| 156 | <i>Leucas cephalotes</i>          | Guma          | H  |                |
| 157 | <i>Leucas sp.</i>                 |               | S  |                |
| 158 | <i>Pogostemon benghalensis</i>    | Utjar         | S  |                |
| 159 | <i>Careya arborea</i>             | Kumhi         | T  | Lecithydaceae  |
| 160 | <i>Leea compactiflora</i>         | Rajbans       | S  | Leeaceae       |
| 161 | <i>L. crispa</i>                  |               | S  |                |
| 162 | <i>L. macrophylla</i>             | Diniya khar   | S  |                |
| 163 | <i>Leea sp</i>                    |               | H  |                |
| 164 | <i>Dendrophoe falcata</i>         | Banjhi        | T  | Loranthaceae   |
| 165 | <i>Taxillus vestitus</i>          |               | T  |                |
| 166 | <i>Visum album</i>                | Hadchur       | T  |                |
| 167 | <i>Lagestromia parviflora</i>     | Botdhayaro    | T  | Loranthaceae   |
| 168 | <i>Woodfordia fruticosa</i>       | Burghairo     | S  |                |
| 169 | <i>Abelmoschus manihot</i>        |               | H  | Malvaceae      |
| 170 | <i>Abutilon indicus</i>           |               | S  |                |
| 171 | <i>Kydia calicina</i>             | Patar         | T  |                |
| 172 | <i>Sida acuta</i>                 | Bariyar       | H  |                |
| 173 | <i>S. cf. acuta</i>               | Bariyar       | H  |                |
| 174 | <i>S. cordata</i>                 | Bariyar       | H  |                |
| 175 | <i>Thespesia lampus</i>           | Bankapas      | H  |                |
| 176 | <i>Urena lobata</i>               | Lapta         | H  |                |
| 177 | <i>Osbeckia nepalensis</i>        | Seto chulesi  | S  | Melastomatacea |
| 178 | <i>Oxyspora paniculata</i>        | Pannisar      | S  |                |
| 179 | <i>Azadirachta indica</i>         | Neem          | T  | Meliaceae      |

|     |                                   |                    |    |                  |
|-----|-----------------------------------|--------------------|----|------------------|
| 180 | <i>Dysoxylum gobara</i>           | Dhamina            | T  |                  |
| 181 | <i>Cissampelos pariera</i>        |                    | Cl | Menispermaceae   |
| 182 | <i>C. pariera hirsuta</i>         |                    | Cl |                  |
| 183 | <i>Pericampylos glaucus</i>       |                    | Cl |                  |
| 184 | <i>Tinospora sinensis</i>         | Gurguj             | Cl |                  |
| 185 | <i>Ficus benghalensis</i>         | Bargaj             | T  | Moraceae         |
| 186 | <i>F. hispida</i>                 | Kothedumar         | T  |                  |
| 187 | <i>F. racemosa</i>                | Gular              | T  |                  |
| 188 | <i>F. semicordata</i>             | Khanayo            | T  |                  |
| 189 | <i>Ficus species</i>              | Khurhur            | T  |                  |
| 190 | <i>Strebus asper</i>              | Sihora             | T  |                  |
| 191 | <i>Ardisia solanacea</i>          |                    | S  | Myrsinaceae      |
| 192 | <i>Ardisia sp</i>                 | Sikata             | T  |                  |
| 193 | <i>Eugenia kurzii</i>             |                    | T  | Myrtaceae        |
| 194 | <i>Syzygium cumini</i>            | Jamun              | T  |                  |
| 195 | <i>S. sp.</i>                     |                    | T  |                  |
| 196 | <i>Boerhavia diffusa</i>          | Punarwa            | H  | Nyctaginaceae    |
| 197 | <i>Nyctanthes arbor - tristis</i> | Harsingar/ Parijat | T  | Oleaceae         |
| 198 | <i>Ludwigia hyssopifolia</i>      | Loyange jhar       | H  | Onagraceae       |
| 199 | <i>L. octavalvis</i>              |                    | H  |                  |
| 200 | <i>Aeginetia indica</i>           |                    | H  | Orobanchaceae    |
| 201 | <i>Oxalis corniculata</i>         | Amta               | H  | Oxalidaceae      |
| 202 | <i>Argemone mexicana</i>          | Kataiya            | H  | Papaveraceae     |
| 203 | <i>Piper longum</i>               | Pipla              | Cl | Piperaceae       |
| 204 | <i>Polygala sp</i>                |                    | H  | Polygalaceae     |
| 205 | <i>Persicaria barbata</i>         | Bisnar             | H  | Polygonaceae     |
| 206 | <i>P. lapathifolia</i>            | Mirmiriya          | H  |                  |
| 207 | <i>Portulaca oleracea</i>         | Nuniya ke sag      | H  | Portulacaceae    |
| 208 | <i>Potamogeton sp</i>             |                    | H  | Potamogetonaceae |
| 209 | <i>Zyzyphus mauritiana</i>        | Bayer              | S  | Rhamnaceae       |
| 210 | <i>Adina cordifolia</i>           | Karma              | T  | Rubiaceae        |
| 211 | <i>Anthocephalus chinensis</i>    | Kadam              | T  |                  |
| 212 | <i>Borreria alata</i>             |                    | H  |                  |
| 213 | <i>Hymenodactylon excelsum</i>    | Bhurkut            | T  |                  |
| 214 | <i>Mitragyna parvifolia</i>       | Tikul              | T  |                  |
| 215 | <i>Pavetia tomentosa</i>          |                    | T  |                  |
| 216 | <i>Randina sp</i>                 | Maidal             | S  |                  |
| 217 | <i>Uncaria sessilifructus</i>     |                    |    |                  |
| 218 | <i>Xeromphis spinisa</i>          | Manphar            | T  |                  |
| 219 | <i>X. uliginosa</i>               | Pirar              | T  |                  |
| 220 | <i>Wendlandia exserta</i>         | Bakkhre            |    |                  |
| 221 | <i>Aegle marmelos</i>             | Bel                | T  | Rutaceae         |
| 222 | <i>Murraya koenigi</i>            | Mitha neem         | S  |                  |
| 223 | <i>Cardiospermum halicacabum</i>  | Tilkor             | Cl | Sapindaceae      |
| 224 | <i>Schleichera oleosa</i>         | Athiyar            | T  |                  |

|                       |                               |                |    |                  |
|-----------------------|-------------------------------|----------------|----|------------------|
| 225                   | <i>Madhuca longifolia</i>     | Banmahuwa      | T  | Sapotaceae       |
| 226                   | <i>Scoparia dulcis</i>        | Mithuwa khar   | H  | Scrophulariaceae |
| 227                   | <i>Lindernia anagallis</i>    |                | H  |                  |
| 228                   | <i>L. crustacea</i>           |                | H  |                  |
| 229                   | <i>L. ruellloides</i>         |                | H  |                  |
| 230                   | <i>Datura metal</i>           | Dhatur         | S  | Solanaceae       |
| 231                   | <i>Physatis divaricata</i>    |                | H  |                  |
| 232                   | <i>Solanum nigrum</i>         | Bhtkaiya       | H  |                  |
| 233                   | <i>S. surattense</i>          | Rengani        | H  |                  |
| 234                   | <i>S. torvum</i>              | Banbhanta      | S  |                  |
| 235                   | <i>Duabanga grandiflora</i>   | Lampate        | T  | Sonneratiaceae   |
| 236                   | <i>Bischofia javanica</i>     | Kaijal         | T  | Staphyleaceae    |
| 237                   | <i>Sterculia hamiltonii</i>   | Chop           | T  | Sterculiaceae    |
| 238                   | <i>Tamarix dioca</i>          |                | S  | Tamaricaceae     |
| 239                   | <i>Schima wallichii</i>       | Chilaune       | T  | Theaceae         |
| 240                   | <i>Grewia disperma</i>        | Phorsa         | T  | Tiliaceae        |
| 241                   | <i>G. helicterifolia</i>      |                | S  |                  |
| 242                   | <i>G. sclerophylla</i>        | Harsa          | S  |                  |
| 243                   | <i>G. subinaqualis</i>        | Glaphar        | H  |                  |
| 244                   | <i>Triumfetta rhomboides</i>  |                |    |                  |
| 245                   | <i>Celtis tetrandra</i>       | Jingara        | T  | Ulmaceae         |
| 246                   | <i>Callicarpa arborea</i>     |                | S  | Verbenaceae      |
| 247                   | <i>C. macrophylla</i>         | Guyalo         | S  |                  |
| 248                   | <i>Clerodendrum indicum</i>   | Babhnaithi     | H  |                  |
| 249                   | <i>C. viscosum</i>            | Bhat           | H  |                  |
| 250                   | <i>Caryopteris odorata</i>    |                | S  |                  |
| 251                   | <i>Gmelina arborea</i>        | Ghamar         | T  |                  |
| 252                   | <i>Lantana camera</i>         | Phuljhar       | S  |                  |
| 253                   | <i>Vitex negundo</i>          | Senuwar        | T  |                  |
| 254                   | <i>Ampelocissus latifolia</i> |                | Cl | Vitaceae         |
| 256                   | <i>Cayrantia trifolia</i>     | Panlati        | Cl |                  |
| 257                   | <i>Cissus javanica</i>        |                | Cl |                  |
| <b>Monocotyledons</b> |                               |                |    |                  |
| 258                   | <i>Arisaema tortuosum</i>     | Sarpa ko amkai | H  | Araceae          |
| 259                   | <i>Remusatia vivipara</i>     | Kachu          | H  |                  |
| 260                   | <i>Rhaphidophora glauca</i>   |                | Cl |                  |
| 261                   | <i>Calamus acanthospathus</i> | Bet            | S  | Arecaceae        |
| 262                   | <i>Phoenix humilis</i>        | Khajur         | T  |                  |
| 263                   | <i>P. sylvestris</i>          | Khajur         | T  |                  |
| 264                   | <i>Commelina spp.</i>         |                | H  | Commelinaceae    |
| 265                   | <i>Murdania nudiflora</i>     |                | H  |                  |
| 266                   | <i>Cyperus anabilis</i>       |                | H  | Cyperaceae       |
| 267                   | <i>C. compressus</i>          |                | H  |                  |
| 268                   | <i>C. difformis</i>           |                | H  |                  |
| 269                   | <i>C. digitatus</i>           |                | H  |                  |
| 270                   | <i>C. distans</i>             |                | H  |                  |

|     |                                  |                                                 |    |               |
|-----|----------------------------------|-------------------------------------------------|----|---------------|
| 271 | <i>C. iria</i>                   |                                                 | H  |               |
| 272 | <i>C. niveus</i>                 |                                                 | H  |               |
| 273 | <i>Fimbristylis dichotoma</i>    |                                                 | H  |               |
| 274 | <i>F. falcata</i>                |                                                 | H  |               |
| 275 | <i>Kyllinga nemoralis</i>        |                                                 | H  |               |
| 276 | <i>Mariscus sp</i>               |                                                 | H  |               |
| 277 | <i>Scirpus sp</i>                |                                                 | H  |               |
| 278 | <i>Scleria parvula</i>           |                                                 | H  |               |
| 279 | <i>Dioscorea bulbifera</i>       | Githa                                           | Cl | Dioscoreaceae |
| 280 | <i>D. deltoidea</i>              |                                                 | Cl |               |
| 281 | <i>D. pentaphylla</i>            | Ban tarul                                       | Cl |               |
| 282 | <i>Asparagus racemosus</i>       | Santawar/ Kurilo                                | S  | Liliaceae     |
| 283 | <i>Chlorophytum arundinaceum</i> |                                                 | H  |               |
| 284 | <i>C. nepalense</i>              | Dalchini                                        | H  |               |
| 285 | <i>Smilax ovalifolia</i>         | Ram                      datiwan/<br>Kukurdaino | Cl |               |
| 286 | <i>Urginea indica</i>            | Banpyaj                                         | H  |               |
| 287 | <i>Musa sp</i>                   | Bankera                                         | H  | Musaceae      |
| 288 | <i>Aerides multifera</i>         |                                                 | H  | Orchidaceae   |
| 289 | <i>A. odorata</i>                |                                                 | H  |               |
| 290 | <i>Arachnis cathcartii</i>       |                                                 | H  |               |
| 291 | <i>Eulophia sp</i>               |                                                 | H  |               |
| 292 | <i>Peristylis goodyeroides</i>   |                                                 | H  |               |
| 293 | <i>Brachiera ramosa</i>          |                                                 | H  | Poaceae       |
| 294 | <i>Chrysopogon gryllus</i>       |                                                 | H  |               |
| 295 | <i>Coix lachryma-jobi</i>        |                                                 | H  |               |
| 296 | <i>Cymbopogon sp.</i>            | Dhaddi                                          | H  |               |
| 297 | <i>Cynodon dactylon</i>          | Dubo                                            | H  |               |
| 298 | <i>Dactyloctenium aegypticum</i> |                                                 | H  |               |
| 299 | <i>Desmostachya bipinnata</i>    | Kush                                            | H  |               |
| 300 | <i>Dendrocalamus strictus</i>    | Bans                                            | H  |               |
| 301 | <i>Digitaria abludens</i>        |                                                 | H  |               |
| 302 | <i>D. ciliaris</i>               |                                                 | H  |               |
| 303 | <i>D. violascens</i>             |                                                 | H  |               |
| 304 | <i>Echinochloa colona</i>        |                                                 | H  |               |
| 305 | <i>Eragrostis ciliaris</i>       |                                                 | H  |               |
| 306 | <i>E.nigra</i>                   |                                                 | H  |               |
| 307 | <i>E. tremula</i>                |                                                 | H  |               |
| 308 | <i>E. unioloides</i>             |                                                 | H  |               |
| 309 | <i>E sp</i>                      |                                                 | H  |               |
| 310 | <i>Eulaiopsis binata</i>         | Babiyo                                          | H  |               |
| 311 | <i>Iseilema laxum</i>            |                                                 | H  |               |
| 312 | <i>Ophismannus burmanii</i>      | Banos                                           | H  |               |
| 313 | <i>Ophismannus compositus</i>    | Banos                                           | H  |               |

|               |                                 |              |    |                 |
|---------------|---------------------------------|--------------|----|-----------------|
| 314           | <i>Panicum notatum</i>          |              | H  |                 |
| 315           | <i>Paspadium flavidum</i>       |              | H  |                 |
| 316           | <i>Perotis hordeifusca</i>      |              | H  |                 |
| 317           | <i>Phragmites karka</i>         | Narkat       | H  |                 |
| 318           | <i>Saccharum bengalense</i>     | Munj         | H  |                 |
| 319           | <i>S.spontaneum</i>             | Kans         | H  |                 |
| 320           | <i>Setaria pallidifusca</i>     | Bankauri     | H  |                 |
| 321           | <i>Sporobolus dionder</i>       |              | H  |                 |
| 322           | <i>Thysanolaena maxima</i>      | Amliso       | H  |                 |
| 323           | <i>Vetiveeria lawsonii</i>      | Katarighans  | H  |                 |
| 324           | <i>Monochoria vaginalis</i>     |              | H  | pontederiaceae  |
| 325           | <i>Costusspeciosus</i>          |              | H  | Zingiberaceae   |
| 326           | <i>Curcuma angustifolia</i>     |              | H  |                 |
| 327           | <i>C. leucorhiza</i>            |              | H  |                 |
| 328           | <i>Hedychium coccineum</i>      |              | H  |                 |
| 329           | <i>H. stenopetalum</i>          |              | H  |                 |
| Gymnospermeae |                                 |              |    |                 |
| 330           | <i>Pinus roxiburghii</i>        | Sallo        | T  | Pianceae        |
| Pteridophytes |                                 |              |    |                 |
| 331           | <i>Diplazium esculentum</i>     | Lamtusia     | H  | Aspidiaceae     |
| 332           | <i>Ophioglossum reticulatum</i> | Jibre ko sag | H  | Ophioglossaceae |
| 333           | <i>Adiantum phillippense</i>    | Ratjari      | H  | Polypodiaceae   |
| 334           | <i>Cryptogramma crista</i>      |              | H  | Pteridaceae     |
| 335           | <i>Lygodium japonicum</i>       |              | Cl | Schizaeaceae    |
| 336           | <i>Equisetum sp.</i>            | Kurkure jhar |    | Equisetaceae    |

Source: Nepal Biodiversity Resource Book (2007)

**Legend: H= Herb, S = Shrub, T = Tree, and Cl = Climber**

## Annex II: List of Mammal Species of the PNP

| Family          | Scientific Name              | Common Name                                                | Status |       |       |       |              |
|-----------------|------------------------------|------------------------------------------------------------|--------|-------|-------|-------|--------------|
|                 |                              |                                                            | GoN    | NR DB | IUC N | CITES | local status |
| Bovidae         | <i>Bos gaurus</i>            | Indian bison                                               | P      | E     | V     | I     | Ra           |
|                 | <i>Tetraceros</i>            | ( <i>gaurigai</i> )                                        | P      | E     | E     | III   | Ra           |
|                 | <i>quadricornis</i>          | Four-horned                                                | -      | V     | -     | -     | Ra           |
|                 | <i>Boselaphus</i>            | antelope                                                   |        |       |       |       |              |
| Canidae         | <i>tragocamelus</i>          | Blue bull ( <i>nilgai</i> )                                |        |       |       |       |              |
|                 | <i>Canis aureus</i>          | Golden jackal                                              | -      | -     | -     | III   | Co           |
|                 | <i>Vulpes</i>                | Bengal fox                                                 | -      | S     | I     | III   | Oc           |
|                 | <i>benghalensis</i>          | Wolf ( <i>boaso</i> )                                      | P      | -     | V     | I     | Ra           |
|                 | <i>Cunis lupus</i>           | Wild dog ( <i>ban kukur</i> )                              | -      | -     | V     | II    | Oc           |
| Cercopithecidae | <i>Cuon alpinus</i>          |                                                            |        |       |       |       |              |
|                 | <i>Macaca mulatta</i>        | Rhesus macaque                                             | -      | S     | -     | II    | Co           |
|                 | <i>Semnopithecus entellu</i> | ( <i>bandar</i> )<br>Hanuman langur                        | -      | S     | -     | I     | Co           |
| Cervidae        | <i>Axis axis</i>             | Spotted deer                                               | -      | -     | -     | -     | Co           |
|                 | <i>Axis porcinus</i>         | ( <i>chital</i> )                                          | -      | S     | -     | I     | Oc           |
|                 | <i>Muntiacus</i>             | Hog deer                                                   | -      | -     | -     | -     | Co           |
|                 | <i>muntjak</i>               | ( <i>laguna</i> )                                          | -      | S     | -     | -     | Oc           |
|                 | <i>Cervus unicolor</i>       | Barking deer ( <i>ratuwa</i> )<br>Sambar ( <i>jarayo</i> ) |        |       |       |       |              |
| Elephantidae    | <i>Elephas maximus</i>       | Asiatic elephant ( <i>jungali hatti</i> )                  | P      | E     | E     | I     | Oc           |
| Felidae         | <i>Felis chaus</i>           | Jungle cat ( <i>ban biralo</i> )                           | -      | S     | -     | II    | Oc           |
|                 | <i>Felis bengalensis</i>     |                                                            | P      | V     | -     | I     | Ra           |
|                 | <i>Panthera pardus</i>       | Leopard cat                                                | -      | S     | -     | I     | Oc           |
|                 | <i>Panthera tigris</i>       | ( <i>chari biralo</i> )                                    | P      | E     | E     | I     | Ra           |
|                 |                              | Leopard ( <i>chituwa</i> )<br>Tiger ( <i>bagh</i> )        |        |       |       |       |              |
| Hystriidae      | <i>Hystrix indica</i>        | Indian crested porcupine ( <i>dumsi</i> )                  | -      | -     | -     | -     | Ra           |

|                  |                                |                                                 |   |   |   |    |    |
|------------------|--------------------------------|-------------------------------------------------|---|---|---|----|----|
| Herpestidae      | <i>Herpestes edwardsii</i>     | Indian grey mongoose<br>( <i>neuri musa</i> )   | - | - | - | -  | Co |
|                  | <i>Herpestes javanicus</i>     | Small Asian mongoose                            | - | - | - | -  | Co |
| Leporidae        | <i>Caprolagus hispidus</i>     | Hispid hare<br>( <i>kharayo</i> )               | - | - | - | -  | Ra |
|                  | <i>Lepus nigricollis</i>       | Indian hare<br>( <i>kharao</i> )                | - | - | - | -  | Co |
| Sciuridae        | <i>Funambulus pennati</i>      | Five stripe squirrel<br>( <i>lokharke</i> )     | - | - | - | -  | Co |
| Suidae           | <i>Sus scrofa</i>              | Wild boar ( <i>badel</i> )                      | - | - | - | -  | Co |
| Vespertilionidae | <i>Pipistrellus coromandra</i> | Indian pipistrelle<br>( <i>chamero</i> )        | - | - | - | -  | -  |
|                  | <i>Scotophilus heathi</i>      | Yellow hose bat<br>( <i>cahmero</i> )           | - | - | - | -  | -  |
| Viverridae       | <i>Viverricula indica</i>      | Small Indian civet<br>( <i>rasse</i> )          | - | - | - | -  | Oc |
| Ursidae          | <i>Melursus ursinus</i>        | Sloth bear ( <i>bhalu</i> )                     | - | - | V | I  | Oc |
| Rhinocerotidae   | <i>Rhinoceros unicornis</i>    | Asian one-horned Rhinoceros<br>( <i>gaida</i> ) | P | E | E | I  | Ra |
| Manidae          | <i>Manis crassicaudata</i>     | Scaly ant eater<br>( <i>salak</i> )             | P | E | S | II | Ra |
| Muridae          | <i>Bandicota bengalensis</i>   | Indian mole rat<br>( <i>musa</i> )              | - | - | - | -  | Co |
|                  | <i>Bandicota indica</i>        | House rat ( <i>musa</i> )                       | - | - | - | -  | Co |
|                  | <i>Rattus rattus</i>           | Mouse ( <i>musa</i> )                           | - | - | - | -  | Co |
|                  | <i>Mus musculus</i>            | Tree mouse                                      | - | - | - | -  | Co |
|                  | <i>Vadeleuria oleracea</i>     |                                                 |   |   |   |    |    |
|                  |                                |                                                 |   |   |   |    |    |
| Hyaenidae        | <i>Hyaena hyaena</i>           | Striped hyaena<br>( <i>hundar</i> )             | P | V | - | -  | Ra |

Source: Nepal Biodiversity Resource Book (2007)

P= GON protected, E = endangered, I = indeterminate, V = vulnerable, K= insufficiently known,

S= Susceptible, I, II, III= CITES, Ra= rare, Oc= occasional, Co = common

### Annex III: List of Bird Species Found in the PNP

| SN | Family                         | Scientific Name                   | Common Name               | GON  | IUCN | CITES |
|----|--------------------------------|-----------------------------------|---------------------------|------|------|-------|
|    |                                |                                   |                           | 1973 | 1994 | 1994  |
| 1  | Podicipedidae (Grebes)         | <i>Tachybatus ruficollis</i>      | Little Grebe              |      |      |       |
| 2  |                                | <i>Podiceps cristatus</i>         |                           |      |      |       |
| 3  | Phalacrocoracidae (Cormorants) | <i>Phalacrocorax carbo</i>        | Great Cormorant           |      |      |       |
| 4  |                                | <i>Phalacrocorax niger</i>        | Little darter             |      |      |       |
| 5  |                                | <i>Anhinga melanogaster</i>       | Darter                    |      |      |       |
| 6  | Ardeidae (Bitterns)            | <i>Botaurus stellaris</i>         | Eurasian Bittern          |      |      | 1     |
| 7  |                                | <i>Ixobrychus sinensis</i>        | Yellow Bittern            |      |      |       |
| 8  |                                | <i>Ixobrychus cinnamomeus</i>     | Cinnamon bittern          |      |      |       |
| 9  |                                | <i>Dupetor flavicollis</i>        | Black Bittern             |      |      |       |
| 10 | Hérons                         | <i>Nycticorax nycticorax</i>      | Black-crowned night heron |      |      |       |
| 11 |                                | <i>Butorides striatus</i>         | Green-backed heron        |      |      |       |
| 12 |                                | <i>Ardeola grayii</i>             | Indian Pond Heron         |      |      |       |
| 13 | Egrets                         | <i>Bubulcus ibis</i>              | Cattle egret              |      |      |       |
| 14 |                                | <i>Egretta garzetta</i>           | Little Egret              |      |      |       |
| 15 |                                | <i>Mesophoyx intermedia</i>       | Intermediate Egret        |      |      |       |
| 16 |                                | <i>Casmerodius albus</i>          | Great Egret               |      |      |       |
| 17 |                                | <i>Ardea cinerea</i>              | Grey Heron                |      |      |       |
| 18 |                                | <i>Ardea purpurea</i>             | Purple Heron              |      |      |       |
| 19 | Coconiidae(Storks)             | <i>Mycteria leucocephala</i>      | Painted Stork             |      |      |       |
| 20 |                                | <i>Anastomus oscitans</i>         | Asian Open-bill Stork     |      |      |       |
| 21 |                                | <i>Ciconia nigra</i>              | Black Stork               | P    | E    |       |
| 22 |                                | <i>Ciconia episcopus</i>          | Wooly-necked Stork        |      |      |       |
| 23 |                                | <i>Ciconia ciconia</i>            | White Stork               | P    | E    |       |
| 24 |                                | <i>Ephippiorhynchus asiaticus</i> | Black Necked Stork        |      |      |       |
| 25 |                                | <i>Leptoptelis dubius</i>         | Greater Adjutant Stork    |      | E    |       |
| 26 |                                | <i>Leptoptelis javanicus</i>      | Lesser Adjutant Stork     |      | V    |       |
| 27 | Threskiornithidae(Ibis)        | <i>Pseudibis papillos</i>         | Red-naped Ibis            |      |      |       |

|    |                              |                                 |                                |  |   |   |
|----|------------------------------|---------------------------------|--------------------------------|--|---|---|
| 28 | Anatidae(Ducks & Gees)       | <i>Dendrocygna javanica</i>     | Lesser Whistling Duck          |  |   |   |
| 29 |                              | <i>Cygnus columbianus</i>       |                                |  |   |   |
| 30 |                              | <i>Anser fabalis</i>            |                                |  |   |   |
| 31 |                              | <i>Anser anser</i>              | Greylag goose                  |  |   |   |
| 32 |                              | <i>Anser indicus</i>            | Bar headed goose               |  |   |   |
| 33 |                              | <i>Tadorna ferruginea</i>       | Ruddy Shelduck                 |  |   |   |
| 34 |                              | <i>Tadorna tadorna</i>          | Common Shelduck                |  |   |   |
| 35 |                              | <i>Nettapus coromandelianus</i> | Cotton Pigmy Goose             |  |   |   |
| 36 |                              | <i>Anas penelope</i>            | Eurasian Wigeon                |  |   | 2 |
| 37 |                              | <i>Anas falcata</i>             | alcated duck                   |  |   |   |
| 38 |                              | <i>Anas strepera</i>            | Gad wall                       |  |   |   |
| 39 |                              | <i>Anas crecca</i>              | Common Teal                    |  |   |   |
| 40 |                              | <i>Anas platyrhynchos</i>       | Mallard                        |  |   |   |
| 41 |                              | <i>Anas poecilorhyncha</i>      | Spotbill                       |  |   |   |
| 42 |                              | <i>Anas acuta</i>               | Northern Pintail               |  |   |   |
| 43 |                              | <i>Anas querquedula</i>         | Garganey                       |  |   |   |
| 44 |                              | <i>Anas clypeata</i>            | Northern shoveler              |  |   |   |
| 45 |                              | <i>Netta rufina</i>             | Red crested Pochard            |  |   |   |
| 46 |                              | <i>Aythya ferina</i>            | Common Pochard                 |  |   |   |
| 47 |                              | <i>Athya nyroca</i>             | Ferruginous Duck               |  |   |   |
| 48 |                              | <i>Athya filigula</i>           | Tufted duck                    |  |   |   |
| 49 |                              | <i>Bucephala clangula</i>       | Common Golden eye              |  |   |   |
| 50 |                              | <i>Mergellus albelus</i>        | Smew                           |  |   |   |
| 51 |                              | <i>Mergus merganser</i>         | Goosander                      |  |   |   |
| 52 | Accipitridae (Birds of prey) | <i>Aviceda leuphotes</i>        | Black Baza                     |  |   |   |
| 53 |                              | <i>Pernis ptilorhyncus</i>      | Crested Honey Bizzard          |  |   |   |
| 54 |                              | <i>Elanus caeruleus</i>         | Black Shouldered Kite          |  |   | 2 |
| 55 |                              | <i>Milvus migarns</i>           | Black Kite                     |  |   |   |
| 56 |                              | <i>Haliaeetus leucoryphus</i>   | Pallas's Fish Eagle            |  |   |   |
| 57 |                              | <i>Haliaeetus indus</i>         | Brahmini Kite                  |  |   |   |
| 58 |                              | <i>Haliaeetus albicilla</i>     | White tailed eagle             |  | V | 1 |
| 59 |                              | <i>Ichthyophaga humilus</i>     | Eagle                          |  |   |   |
| 60 |                              | <i>Ichthyophaga ichthyaetus</i> | Grey headed fishing eagle      |  |   |   |
| 61 |                              | <i>Neophron percnopterus</i>    | Egyptian vulture               |  |   |   |
| 62 |                              | <i>Gyps bengalensis</i>         | Oriental white blacked vulture |  |   |   |

|    |            |                                   |                          |   |  |   |
|----|------------|-----------------------------------|--------------------------|---|--|---|
| 63 |            | <i>Gyps fulvus</i>                | Eurasian Griffon Vulture |   |  |   |
| 64 |            | <i>Gyps indicus</i>               | Indian Griffon           |   |  |   |
| 65 |            | <i>Sarcogyps calvus</i>           | Red headed vulture       |   |  |   |
| 66 |            | <i>Aegypius monachus</i>          | Eurasian Black Vulture   | V |  | 2 |
| 67 |            | <i>Circaetus gallicus</i>         | Short toed eagle         |   |  |   |
| 68 |            | <i>Spilornis cheela</i>           | Crested Serpent Eagle    |   |  | 2 |
| 69 |            | <i>Circus aeruginosus</i>         | Eurasian Marsh Harrier   |   |  |   |
| 70 |            | <i>Circus cyaneus</i>             | Hen Harrier              |   |  |   |
| 71 |            | <i>Circus macrourus</i>           | Pallid Harrier           |   |  |   |
| 72 |            | <i>Circus pygargus</i>            | Montagu's Harrier        |   |  |   |
| 73 |            | <i>Circus melanoleucus</i>        | Pied Harrier             |   |  | 2 |
| 74 |            | <i>Accipiter gentilis</i>         | Northern Goshawk         |   |  |   |
| 75 |            | <i>Accipiter nisus</i>            | Shikra                   |   |  |   |
| 76 |            | <i>Accipiter virgatus</i>         | Besra                    |   |  |   |
| 77 |            | <i>Accipiter trivigatus</i>       | Crested Goshawk          |   |  | 2 |
| 78 |            | <i>Accipiter badius</i>           | Common Buzzard           |   |  | 2 |
| 79 |            | <i>Butastur teesa</i>             | White eyed Buzzard       |   |  | 2 |
| 80 |            | <i>Buteo buteo</i>                | Common Buzzard           |   |  | 2 |
| 81 |            | <i>Buteo rufinus</i>              | Long legged buzzard      |   |  | 2 |
| 82 |            | <i>Buteo hemilasius</i>           | Upland buzzard           |   |  | 2 |
| 83 |            | <i>Ictinaetus malayensis</i>      | Black eagle              |   |  |   |
| 84 |            | <i>Aquila pomarina</i>            | Lesser spotted eagle     |   |  | 2 |
| 85 |            | <i>Aquila clanga</i>              | Greater spotted eagle    |   |  |   |
| 86 |            | <i>Aquila nipalensis</i>          | Steppe Eagle             |   |  |   |
| 87 |            | <i>Hieraetus pennatus</i>         | Booted eagle             |   |  |   |
| 88 |            | <i>Aquila vindhiana</i>           | Tawny eagle              |   |  |   |
| 89 |            | <i>Hieraetus kienerii rufosus</i> | Bellied eagle            |   |  |   |
| 90 |            | <i>Aquila heliaca</i>             | Imperial Eagle           | R |  | 1 |
| 91 |            | <i>Aquila chrysaetos</i>          | Golden Eagle             |   |  |   |
| 92 |            | <i>Spizaetus cirrhatus</i>        | Changeable hawk eagle    |   |  | 2 |
| 93 |            | <i>Spizaetus nipalensis</i>       | Mountain Hawk eagle      |   |  | 2 |
| 94 |            | <i>Pandion haliaetus</i>          | Osprey                   |   |  | 2 |
| 95 | Falconidae | <i>Microhircus caerulescens</i>   | Red-thighed falconet     |   |  |   |
| 96 |            | <i>Falco tinnunculus</i>          | Common kestrel           |   |  |   |
| 97 |            | <i>Falco chicquera</i>            | Red-necked Falcon        |   |  | 2 |
| 98 |            | <i>Falco amurensis</i>            | Amur Falcon              |   |  | 2 |
| 99 |            | <i>Falco subbuteo</i>             | Eurasian Hobby           |   |  |   |

|     |                                     |                                 |                            |   |   |   |
|-----|-------------------------------------|---------------------------------|----------------------------|---|---|---|
| 100 |                                     | <i>Falco severus</i>            | Oriental hobby             |   |   | 2 |
| 101 |                                     | <i>Falco naumanni</i>           | Lesser Kestral             |   |   | 2 |
| 102 |                                     | <i>Falco jugger</i>             | Lagger                     |   |   | 2 |
| 103 |                                     | <i>Falco peregrinus</i>         | Peregrine                  |   |   | 1 |
| 104 | Phasianidae (Game birds)            | <i>Francoplinus francolinus</i> | Black francolin            |   |   |   |
| 105 |                                     | <i>Lophura leucomelana</i>      | Kalij Pheasant             |   |   |   |
| 106 |                                     | <i>Francoplinus gularis</i>     | Swamp Francolin            |   | V |   |
| 107 |                                     | <i>Coturnix coturnix</i>        | Common quail               |   |   |   |
| 108 |                                     | <i>Coturnix coromandelica</i>   | Black breasted Quail       |   |   |   |
| 109 |                                     | <i>Coturnix chinensis</i>       | Blue breasted Quail        |   |   |   |
| 110 |                                     | <i>Gallus gallus</i>            | Red jungle Fowl            |   |   |   |
| 111 |                                     | <i>Pavo cristatus</i>           | Blue peafowl               |   |   |   |
| 112 | Turnicidae (Button quails)          | <i>Turnix sylvatica</i>         | Striped button Quail       |   |   |   |
| 113 |                                     | <i>Turnix tanki</i>             | Yellow legged button quail |   |   |   |
| 114 | Rallidae (Rails & Crakes)           | <i>Porzana pusilla</i>          | Bailon's crakes            |   |   |   |
| 115 |                                     | <i>Porzana fusca</i>            | Ruddy breasted Crake       |   |   |   |
| 116 |                                     | <i>Amaurornis akool</i>         | Brown crake                |   |   |   |
| 117 |                                     | <i>Amaurornis phoenicurus</i>   | White breasted water hen   |   |   |   |
| 118 |                                     | <i>Gallinula chloropus</i>      | Common moorhen             |   |   |   |
| 119 |                                     | <i>Porphyrio porphyrio</i>      | Purple Gallinule           |   |   |   |
| 120 |                                     | <i>Fulica arta</i>              | Common Coot                |   |   |   |
| 121 | Gruidae                             | <i>Grus grus</i>                | Common Crane               | P |   |   |
| 122 |                                     | <i>Anthropoides virgo</i>       | Demoiselle Crane           |   |   | 2 |
| 123 |                                     | <i>Grus antigone</i>            | Sarus Crane                | P |   |   |
| 124 | Otitidae (Bustards)                 | <i>Houbaropsis bengalensis</i>  | Bengal Florican            | P | E | 1 |
| 125 |                                     | <i>Sypheotides indica</i>       | Lesser florican            | P | E | 1 |
| 126 | Jacaniidae (Jacane)                 | <i>Hydrophasianus chirurgus</i> | Pheasant tailed Jacana     |   |   |   |
| 127 |                                     | <i>Metopidus indicus</i>        | Bronze winged Jacabna      |   |   |   |
| 128 | Rostratuidae (Painted snipe)        | <i>Rostratula benghalensis</i>  | Greater Painted snipe      |   |   |   |
| 129 | Recurvirostridae (Ibisbil & Stilts) | <i>Haematopus himantopus</i>    | Black-wing Stilt           |   |   |   |
| 130 |                                     | <i>Recurvirostra avoretta</i>   | Avocet                     |   |   |   |

|     |                           |                                |                          |  |   |  |
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| 131 | Burhinidae (Stone curlew) | <i>Burhinus oedicnemus</i>     | Northern Stone curlew    |  |   |  |
| 132 |                           | <i>Esacus recurvirostris</i>   | Great stone plover       |  |   |  |
| 133 | Glaeolidae (Pratincole)   | <i>Glareola maldivarum</i>     | Oriental Pratincole      |  |   |  |
| 134 |                           | <i>Glareola lactea</i>         | Little Pratincole        |  |   |  |
| 135 | Charadriidae (Waders)     | <i>Charadrius mongolus</i>     | Lesser sand plover       |  |   |  |
| 136 |                           | <i>Pluvialis fulva</i>         | Pacific Golden Plover    |  |   |  |
| 137 |                           | <i>Himantopus himantopus</i>   | Black winged stilt       |  |   |  |
| 138 |                           | <i>Recurvirostra avosetta</i>  | Pied avocet              |  |   |  |
| 139 |                           | <i>Hoplopterus duvauceli</i>   | River Plover             |  |   |  |
| 140 |                           | <i>Hoplopterus malabaricus</i> | Yellow wattled plover    |  |   |  |
| 141 |                           | <i>Hoplopterus cinereus</i>    | Grey headed plover       |  |   |  |
| 142 |                           | <i>Hoplopterus indicus</i>     | Red wattled plover       |  |   |  |
| 143 |                           | <i>Vanellus vanellus</i>       | Northern lapwing         |  |   |  |
| 144 | Scolopacidae              | <i>Calidris alba</i>           | Sanderling               |  |   |  |
| 145 |                           | <i>Calidris minuta</i>         | Little stint             |  |   |  |
| 146 |                           | <i>Calidris temminckii</i>     | Temminck's Stint         |  |   |  |
| 147 |                           | <i>Calidris ferruginea</i>     | Curlew Sandpiper         |  |   |  |
| 148 |                           | <i>Calidris alpina</i>         | Dunlin                   |  |   |  |
| 149 |                           | <i>Philomachus pugnax</i>      | Ruff                     |  |   |  |
| 150 |                           | <i>Lymnocyptes minimus</i>     | Jack snipe               |  |   |  |
| 151 |                           | <i>Gallinago gallinago</i>     | Common snipe             |  |   |  |
| 152 |                           | <i>Gallinago stenura</i>       | Pintail snipe            |  |   |  |
| 153 |                           | <i>Scolopax rusticola</i>      | Eurasian wood cock       |  |   |  |
| 154 |                           | <i>Numenius phaeopus</i>       | Whimbrel                 |  |   |  |
| 155 |                           | <i>Numenius arquata</i>        | Eurasian curlew          |  |   |  |
| 156 |                           | <i>Tringa erythropus</i>       | Spotted redshank         |  |   |  |
| 157 |                           | <i>Tringa totanus</i>          | Common Redshank          |  | 1 |  |
| 158 |                           | <i>Tringa stagnatilis</i>      | Marsh Sandpiper          |  |   |  |
| 159 |                           | <i>Tringa nebularia</i>        | Common Greenshank        |  |   |  |
| 160 |                           | <i>Tringa achropus</i>         | Green sanpiper           |  |   |  |
| 161 |                           | <i>Tringa glareola</i>         | Wood sandpiper           |  |   |  |
| 162 | Laridae (Gulls)           | <i>Larus ichthyaetus</i>       | Great black headed Gull  |  |   |  |
| 163 |                           | <i>Larus ridibundus</i>        | Common black headed Gull |  |   |  |
| 164 |                           | <i>Larus brunnicephalus</i>    | Brown headed Gull        |  |   |  |

|     |                           |                                   |                              |  |  |  |
|-----|---------------------------|-----------------------------------|------------------------------|--|--|--|
| 165 |                           | <i>Gelochelidon nilotica</i>      | Gull bill ed Tern            |  |  |  |
| 166 | Terns                     | <i>Sterna caspia</i>              | Caspian Tern                 |  |  |  |
| 167 |                           | <i>Sterna aurantia</i>            | River Tern                   |  |  |  |
| 168 |                           | <i>Sterna hirundo</i>             | Common Tern                  |  |  |  |
| 169 |                           | <i>Sterna acuticauda</i>          | Black bellied Tern           |  |  |  |
| 170 |                           | <i>Sterna albifrons</i>           | Little Tern                  |  |  |  |
| 171 |                           | <i>Chlidonias leucopterus</i>     | White winged Black Tern      |  |  |  |
| 172 |                           | <i>Rynchops albicollis</i>        | Indian Skimmer               |  |  |  |
| 173 | Columbidae (Doves)        | <i>Cloumba livia</i>              | Rock Pigeon                  |  |  |  |
| 174 |                           | <i>Streptopelia decaocto</i>      | Eurasian collared Dove       |  |  |  |
| 175 |                           | <i>Streptopelia tranquebarica</i> | Red turtle dove              |  |  |  |
| 176 |                           | <i>Streptopelia orientalis</i>    | Oriental(Rufous) Turtle dove |  |  |  |
| 177 |                           | <i>Streptopelia chinensis</i>     | Spotted Dove                 |  |  |  |
| 178 |                           | <i>Streptopelia senegalensis</i>  | Laughing Dove                |  |  |  |
| 179 |                           | <i>Chalcophas indica</i>          | Emerald dove                 |  |  |  |
| 180 |                           | <i>Treron bicincta</i>            | Orange breasted green pigeon |  |  |  |
| 181 | Pigeons                   | <i>Treron pompadora</i>           | Pompador green pigeon        |  |  |  |
| 182 |                           | <i>Treron phoenicoptera</i>       | Yellow footed green pigeon   |  |  |  |
| 183 |                           | <i>Treron curvirostra</i>         | Thick billed Green Pigeon    |  |  |  |
| 184 |                           | <i>Treron apicauda</i>            | Pin- tail Green Pigeon       |  |  |  |
| 185 |                           | <i>Ducul badia</i>                | Imperial Pigeon              |  |  |  |
| 186 | Psittaculidae (Parakeets) | <i>Psitta eupatria</i>            | Alexandrine Parakeet         |  |  |  |
| 187 |                           | <i>Psittacula krameri</i>         | Ring necked Parakeet         |  |  |  |
| 188 |                           | <i>Psittacula himalayana</i>      | Slaty headed Parakeet        |  |  |  |
| 189 |                           | <i>Psittacula cyanocephala</i>    | Blossom headed Parakeet      |  |  |  |
| 190 |                           | <i>Psittacula alexandrii</i>      | Moustached Parakeet          |  |  |  |
| 191 |                           | <i>Psittacula roseata</i>         | Blossom headed Parakeet      |  |  |  |
| 192 | Cuculidae (Cuckoos)       | <i>Clamator coromandus</i>        | Chestnut winged cuckoo       |  |  |  |
| 193 |                           | <i>Clamato jacobinus</i>          | Pied crested (Jacobin)       |  |  |  |
| 194 |                           | <i>Chrysococcyx</i>               | Emerald Cuckoo               |  |  |  |

|     |                           |                                     |                                 |  |  |
|-----|---------------------------|-------------------------------------|---------------------------------|--|--|
|     |                           | <i>malculatus</i>                   |                                 |  |  |
| 195 |                           | <i>Cocomantis sonneratii</i>        | Banded Bay Cuckoo               |  |  |
| 196 |                           | <i>Hieococcyx varius</i>            | Common Hawk cuckoo              |  |  |
| 197 |                           | <i>Hieococcyx sparverioides</i>     | Large Hawk Cuckoo               |  |  |
| 198 |                           | <i>Cacomantis passerinus</i>        | Grey bellied Plaintive Cuckoo   |  |  |
| 199 |                           | <i>Cacomantis merulinus</i>         | Rufous bellied plaintive cuckoo |  |  |
| 200 |                           | <i>Cuculus micropterus</i>          | Indian cuckoo                   |  |  |
| 201 |                           | <i>Cuculus canorus</i>              | Common cuckoo                   |  |  |
| 202 |                           | <i>Surnculus lugubris</i>           | Drongo cuckoo                   |  |  |
| 203 |                           | <i>Eudynamys scolopacea</i>         | Common koel                     |  |  |
| 204 |                           | <i>Phaenicophaeus tristis</i>       | Green billed Malkoha            |  |  |
| 205 |                           | <i>Phaenicophaeus leschenaultii</i> | Sirkeer Malkoha                 |  |  |
| 206 | Centropodae               | <i>Centropus sinensis</i>           | Greater Coucal                  |  |  |
| 207 |                           | <i>Centropus bengalensis</i>        | Lesser Coucal                   |  |  |
| 208 | Strigidae (Owls)          | <i>Otus bakkamoena</i>              | Collared scops owl              |  |  |
| 209 |                           | <i>Tyto capensis</i>                | Grass owl                       |  |  |
| 210 |                           | <i>Bubo coromandus</i>              | Dusky eagle owl                 |  |  |
| 211 |                           | <i>Bubo nipalensis</i>              | Forest eagle owl                |  |  |
| 212 |                           | <i>Ketupa flavipes</i>              | Tawny fish owl                  |  |  |
| 213 |                           | <i>Ketupa zylonensis</i>            | Brown fish owl                  |  |  |
| 214 |                           | <i>Glaucidium radiatum</i>          | Jungle owlet                    |  |  |
| 215 |                           | <i>Glaucidium cuculoides</i>        | Asian barred owlet              |  |  |
| 216 |                           | <i>Ninox scutulata</i>              | Brown Hawk owl                  |  |  |
| 217 |                           | <i>Athene brama</i>                 | Spotted little owl              |  |  |
| 218 |                           | <i>Asio flammeus</i>                | short eared owl                 |  |  |
| 219 | Caprimulgidae (Nightjars) | <i>Caprimulgus asiaticus</i>        | Indian Nightjar                 |  |  |
| 220 |                           | <i>Caprimulgus macrurus</i>         | Large tailed Nightjar           |  |  |
| 221 |                           | <i>Caprimulgus affinis</i>          | Franklin's Nightjar             |  |  |
| 222 |                           | <i>Caprimulgus indicus</i>          | Jungle Nightjar                 |  |  |
| 223 | Apopidae (Swifts)         | <i>Zoonavena sylvatica</i>          | White-rumped Needletail         |  |  |
| 224 |                           | <i>Hirundapus caudacutus</i>        | White throated Needletail       |  |  |
| 225 |                           | <i>Hirundapus cochinchinensis</i>   | white vented needletail         |  |  |
| 226 |                           | <i>Colocallia brevirostris</i>      | Himalayan Swiftlet              |  |  |

|     |                           |                                 |                                |  |  |  |
|-----|---------------------------|---------------------------------|--------------------------------|--|--|--|
| 227 |                           | <i>Apus apus</i>                | Common Swift                   |  |  |  |
| 228 |                           | <i>Apus pacificus</i>           | Pacific Swift                  |  |  |  |
| 229 |                           | <i>Apus melba</i>               | Alpine Swift                   |  |  |  |
| 230 |                           | <i>Apus affinis</i>             | Little Swift                   |  |  |  |
| 231 |                           | <i>Cypsiurus balasiensis</i>    | Asian Palm Swift               |  |  |  |
| 232 | Hemiprocnidae             | <i>Hemiprocne coronata</i>      | Crested Tree Swift             |  |  |  |
| 233 | Trogonidae                | <i>Hapactes erythrocephalus</i> | Red Headed Trogon              |  |  |  |
| 234 | Alcedinidae (Kingfishers) | <i>Halcyon symmensis</i>        | White breasted kingfisher      |  |  |  |
| 235 |                           | <i>Halcyon pileata</i>          | Black capped kingfisher        |  |  |  |
| 236 |                           | <i>Pelargopsis capensis</i>     | Stork billed kingfisher        |  |  |  |
| 237 |                           | <i>Alcedo meninting</i>         | Blue Eared Kingfisher          |  |  |  |
| 238 |                           | <i>Alcedo atthis</i>            | Common kingfisher              |  |  |  |
| 239 |                           | <i>Ceryle lugubris</i>          | Large pied Kingfisher          |  |  |  |
| 240 |                           | <i>Ceryle rudis</i>             | Pied kingfisher                |  |  |  |
| 241 | Meropidae (Bee eaters)    | <i>Meropes orientalis</i>       | (Little) Green bee eater       |  |  |  |
| 242 |                           | <i>Meropes philippinus</i>      | Blue tailed bee eater          |  |  |  |
| 243 |                           | <i>Meropes leschenaulti</i>     | Chestnut headed bee eater      |  |  |  |
| 244 | Coraciidae (Rollers)      | <i>Eurystomus benghalensis</i>  | Dark Roller                    |  |  |  |
| 245 |                           | <i>Coracias bengalensis</i>     | Indian Roller                  |  |  |  |
| 246 | Bucerotidae (Horn Bills)  | <i>Buceros bicornis</i>         | Gaint Horn Bill                |  |  |  |
| 247 |                           | <i>Anthracoceros malabricus</i> | Pied Hornbill                  |  |  |  |
| 248 |                           | <i>Tockus biristris</i>         | Indian Grey hornbill           |  |  |  |
| 249 | Upupidae (Hoopoes)        | <i>Upupu epops</i>              | Hoopoe                         |  |  |  |
| 250 | Capitonidae               | <i>Mengalaima haemacephala</i>  | Crimson-breasted Barbet        |  |  |  |
| 251 | Picidae (Wood peckers)    | <i>Jynx torquilla</i>           | Eurasian Wryneck               |  |  |  |
| 252 |                           | <i>Picus canus</i>              | Grey headed woodpecker         |  |  |  |
| 253 |                           | <i>Picus flavinucha</i>         | Large Yellow-napped woodpecker |  |  |  |
| 254 |                           | <i>Picus mymencophoneus</i>     |                                |  |  |  |

|     |                         |                                   |                                   |  |  |  |
|-----|-------------------------|-----------------------------------|-----------------------------------|--|--|--|
| 255 |                         | <i>Picus chlorophus</i>           | Small Yellownaped woodpecker      |  |  |  |
| 256 |                         | <i>Celeus brachyurus</i>          | Rufous woodpecker                 |  |  |  |
| 257 |                         | <i>Dinopium shorii</i>            | Three-toed Golden-back woodpecker |  |  |  |
| 258 |                         | <i>Dinopium benghalense</i>       | Lesser Golden backed woodpecker   |  |  |  |
| 259 |                         | <i>Dendrocopos mahrattensis</i>   | Yellow-fronted Pied Woodpecker    |  |  |  |
| 260 |                         | <i>Dendrocopos canicapillus</i>   |                                   |  |  |  |
| 261 |                         | <i>Dendrocopos moluccensis</i>    |                                   |  |  |  |
| 262 |                         | <i>Dendrocopos macei</i>          | Fulvous breasted                  |  |  |  |
| 263 |                         | <i>Chrysocalaphas lucidus</i>     | Large Golden-backed Woodpecker    |  |  |  |
| 264 |                         | <i>Mulleripicus pulverulentus</i> | Great Slaty Woodpecker            |  |  |  |
| 265 |                         | <i>Picumnus innominatus</i>       |                                   |  |  |  |
| 266 |                         | <i>Sesia ochracea</i>             |                                   |  |  |  |
| 267 | Eurylaimidae            | <i>Parisomus dalhousae</i>        | Long-tailed Broad Bill            |  |  |  |
| 268 | Pittidae                | <i>Pitta sordida</i>              | Green Breasted Pitta              |  |  |  |
| 269 |                         | <i>Pitta Prachyura</i>            | Indian Pitta                      |  |  |  |
| 270 | Alaudidae (Lark)        | <i>Mirafra assamica</i>           | Bengal bush lark                  |  |  |  |
| 271 |                         | <i>Eremopterix grisea</i>         | Ashy crowned Finchlark            |  |  |  |
| 272 |                         | <i>Calendrella brachydactyla</i>  | Greater shorttoed lark            |  |  |  |
| 273 |                         | <i>Calendrella raytal</i>         | Sandlark                          |  |  |  |
| 274 |                         | <i>Alauda gulgula</i>             | Oriental skylark                  |  |  |  |
| 275 | Hirundinidae (Swallows) | <i>Riparia paludicola</i>         | Brown throated Sand Martin        |  |  |  |
| 276 |                         | <i>Riparia riparia</i>            | Collard Sand Martin               |  |  |  |
| 277 |                         | <i>Ptyonoprogne rupestris</i>     | Crag Martin                       |  |  |  |
| 278 |                         | <i>Hirundo rustica</i>            | Barn Swallow                      |  |  |  |
| 279 |                         | <i>Hirundo smithii</i>            | Wire tailed Swallow               |  |  |  |
| 280 |                         | <i>Hirundo daurica</i>            | Red rumped Swallow                |  |  |  |
| 281 |                         | <i>Hirundo fluvicola</i>          | Indian cliff Swallow              |  |  |  |
| 282 |                         | <i>Delichon nipalensis</i>        | Nepal house Martin                |  |  |  |
| 283 |                         | <i>Delichon dasypus</i>           |                                   |  |  |  |
| 284 |                         | <i>Delichon urbica</i>            | Common house Martin               |  |  |  |

|     |                                |                                   |                            |  |  |  |
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| 285 | Motacillidae (pipits)          | <i>Anthus richardi</i>            | Richard's Pipit            |  |  |  |
| 286 |                                | <i>Anthus novaeseclandiae</i>     | paddyField Pipit           |  |  |  |
| 287 |                                | <i>Anthus cervinus</i>            |                            |  |  |  |
| 288 |                                | <i>Anthus hodgsoni</i>            | Olive backed pipit         |  |  |  |
| 289 |                                | <i>Anthus trivialis</i>           | Tree pipit                 |  |  |  |
| 290 |                                | <i>Anthus roseatus</i>            | Rosy pipit                 |  |  |  |
| 291 |                                | <i>Anthus spinoletta</i>          | water pipit                |  |  |  |
| 292 |                                | <i>Dendronanthus indicus</i>      | Red Throated Pipit         |  |  |  |
| 293 | Ploceidae (Wagtails)           | <i>Motacilla flava</i>            | Yellow wagtail             |  |  |  |
| 294 |                                | <i>Motacilla citreola</i>         | Citrine wagtail            |  |  |  |
| 295 |                                | <i>Motacilla cinerea</i>          | Grey wagtail               |  |  |  |
| 296 |                                | <i>Motacilla alba</i>             | White wagtail              |  |  |  |
| 297 |                                | <i>Motacilla maderaspatensis</i>  | White browed Wagtail       |  |  |  |
| 298 | (Sparrow)                      | <i>Passer domesticus</i>          | House sparrow              |  |  |  |
| 299 |                                | <i>Passer montanus</i>            | Eurasian Tree Sparrow      |  |  |  |
| 300 |                                | <i>Passer hispaniolensis</i>      | Spanish Sparrow            |  |  |  |
| 301 |                                | <i>Ploceus philippinus</i>        | Baya weaver                |  |  |  |
| 302 |                                | <i>Ploceus benghalensis</i>       | Black breasted Weaver      |  |  |  |
| 303 |                                | <i>Ploceus manyar</i>             | Streaked weaver            |  |  |  |
| 304 | (Munias)                       | <i>Amandava amandava</i>          | Red Avadavat               |  |  |  |
| 305 |                                | <i>Euodice malabarica</i>         | Indian silverbill          |  |  |  |
| 306 |                                | <i>Lonchura striata</i>           | Striated Munia             |  |  |  |
| 307 |                                | <i>Lonchura punctulata</i>        | Scaly breasted Munia       |  |  |  |
| 308 |                                | <i>Lonchura malacca</i>           | Chestnut Mania             |  |  |  |
| 309 | Fringillidae                   | <i>Carpodacus erythrinus</i>      | Common Rose Finch          |  |  |  |
| 310 | Campaphagadae (Cuckoo-shrikes) | <i>Coracina melanoptera</i>       | Black headed Cuckoo shrike |  |  |  |
| 311 |                                | <i>Coracina melaschistos</i>      | Black winged Cuckoo shrike |  |  |  |
| 312 |                                | <i>Coracina novaehollandiae</i>   | Large Cuckoo shrike        |  |  |  |
| 313 |                                | <i>Tephrodornis pondicerianus</i> | Lesser Wood Shrike         |  |  |  |
| 314 |                                | <i>Tephrodornis gularis</i>       | Large wooded Shrike        |  |  |  |
| 315 |                                | <i>Hemipus picatus</i>            | Pied wood Shrike           |  |  |  |
| 316 | (Minivets)                     | <i>Pericrocotus cinnamomes</i>    | Small Minivet              |  |  |  |
| 317 |                                | <i>Pericrocotus flammeus</i>      | Scarlet minivet            |  |  |  |

|     |                         |                                    |                          |  |   |  |
|-----|-------------------------|------------------------------------|--------------------------|--|---|--|
| 318 |                         | <i>Pericrocotus ethologus</i>      | Long-tailed Minivet      |  |   |  |
| 319 |                         | <i>Pericrocotus roseus</i>         | Rosy minivet             |  |   |  |
| 320 | Pyctonotidae (Bulbul)   | <i>Pycnonotus cafer</i>            | Red whiskered Bulbul     |  |   |  |
| 321 |                         | <i>Pycnonotus leucogenys</i>       |                          |  |   |  |
| 322 |                         | <i>Pycnonotus jocosus</i>          | Red vented Bulbul        |  |   |  |
| 323 |                         | <i>Pycnonotus melanicterus</i>     | Black crested Bulbul     |  |   |  |
| 324 |                         | <i>Criniger flaveolus</i>          | White Throated bulbul    |  |   |  |
| 325 |                         | <i>Hypsipetes madagascariensis</i> | Grey Bulbul              |  |   |  |
| 326 | Irenidae (lora)         | <i>Chloropsis aurifrons</i>        | Golden throated leafbird |  |   |  |
| 327 |                         | <i>Chloropsis hardwickii</i>       | Orange-bellied leafbird  |  |   |  |
| 328 |                         | <i>Aegithina tiphia</i>            | Common lora              |  |   |  |
| 329 | Turdidae (Ruby throats) | <i>Brachypteryx montana</i>        | White Browed Shortwing   |  |   |  |
| 330 |                         | <i>Luscinia calliope</i>           | Eurasian Rubythroat      |  |   |  |
| 331 |                         | <i>Luscinia svecica</i>            | Blue throat              |  |   |  |
| 332 |                         | <i>Luscinia pectoralis</i>         | Himalayan bubythroat     |  |   |  |
| 333 |                         | <i>Luscinia brunneas</i>           | Blue Chat                |  |   |  |
| 334 |                         | <i>Copsychus saularis</i>          | Robin Dhyal              |  |   |  |
| 335 |                         | <i>Copsychus malabaricus</i>       | White rumped Shama       |  |   |  |
| 336 | (Redstarts)             | <i>Phoenicurus ochruros</i>        | Black Redstarts          |  |   |  |
| 337 |                         | <i>Rhyacornis fuliginosus</i>      | Plumbeous Redstsr        |  |   |  |
| 338 |                         | <i>Cinclidium leucura</i>          | White tailed Robin       |  |   |  |
| 339 | (Bushchats)             | <i>Saxicola torquata</i>           | Common Stonechat         |  |   |  |
| 340 |                         | <i>Saxicola leucura</i>            | White tailed Stonechat   |  |   |  |
| 341 |                         | <i>Saxicola insignis</i>           | Hodgson's Bushchat       |  |   |  |
| 342 |                         | <i>Saxicola caprata</i>            | Pied Bushchat            |  | K |  |
| 343 |                         | <i>Saxicola ferrea</i>             | Grey Bushchat            |  |   |  |
| 344 |                         | <i>Oenanthe oenanthe</i>           | Isbelline Wheatear       |  |   |  |
| 345 |                         | <i>Oenanthe Deserti</i>            | Desert Wheater           |  |   |  |
| 346 |                         | <i>Chaimaromis leucocephalus</i>   | White capped Redstart    |  |   |  |
| 347 |                         | <i>Saxicoloides fulicata</i>       | Indian Robin             |  |   |  |
| 348 | (Thrus)                 | <i>Monticola cinclorhyncha</i>     | Blue headed Rock Thrus   |  |   |  |
| 349 |                         | <i>Monticola solitarius</i>        | Blue Rock Thrus          |  |   |  |
| 350 |                         | <i>Myiophoneus caeruleus</i>       | Blue Whistling Thrus     |  |   |  |
| 351 |                         | <i>Zoothera monticola</i>          | Large Billed Thrush      |  |   |  |
| 352 |                         | <i>Zoothera dauma</i>              | Scaly (White's) Thrus    |  |   |  |

|     |                     |                                  |                                 |  |  |  |
|-----|---------------------|----------------------------------|---------------------------------|--|--|--|
| 353 |                     | <i>Zoothera citrina</i>          | Orange headed Grond Thrus       |  |  |  |
| 354 |                     | <i>Turdus bouboul</i>            | Gray winged Blackbird           |  |  |  |
| 355 |                     | <i>Turdus ruficollis</i>         | Dark throated                   |  |  |  |
| 356 |                     | <i>Enicurus immaculatus</i>      | Black-back forktail             |  |  |  |
| 357 | Sylvidae (Warblers) | <i>Tesia cyaniventer</i>         | Slaty-bellied Ground Wabler     |  |  |  |
| 358 |                     | <i>Tesia castaneo-coronata</i>   | Chestnut -headed Ground Warbler |  |  |  |
| 359 |                     | <i>Cettia pallidipes</i>         | Pale fotted Bush Warbler        |  |  |  |
| 360 |                     | <i>Cettia major</i>              | Chestnut crowned Bush Warbler   |  |  |  |
| 361 |                     | <i>Cettia flavolivacea</i>       | Aberrent Bush Warbler           |  |  |  |
| 362 |                     | <i>Cettia brunnifrons</i>        | Grey sided Bush Warbler         |  |  |  |
| 363 |                     | <i>Bradypterus thoracicus</i>    | Spotted Bush Warbler            |  |  |  |
| 364 |                     | <i>Bradypterus taczanowskii</i>  | Chinese Bush Warbler            |  |  |  |
| 365 |                     | <i>Locustella lanceolata</i>     | Lanceolated Warbler             |  |  |  |
| 366 |                     | <i>Locustella naevia</i>         | Grasshopper Warbler             |  |  |  |
| 367 |                     | <i>Cisticola exilis</i>          | Bright capped Cisticola         |  |  |  |
| 368 |                     | <i>Cisticola juncidis</i>        | Fan tailed Cisticola            |  |  |  |
| 369 |                     | <i>Prinia gracilis</i>           | Graceful Prinia                 |  |  |  |
| 370 |                     | <i>Prinia inornata</i>           | Plain Prinia                    |  |  |  |
| 371 |                     | <i>Prinia socialis</i>           | Ashy Prinia                     |  |  |  |
| 372 |                     | <i>Prinia hodgsonii</i>          | Grey breasted Prinia            |  |  |  |
| 373 |                     | <i>Prinia flaviventris</i>       | Yellow bellied Prinia           |  |  |  |
| 374 |                     | <i>Prinia criniger</i>           | Striated Prinia                 |  |  |  |
| 375 |                     | <i>Prinia cinereocapilla</i>     | Grey-capped Prina               |  |  |  |
| 376 |                     | <i>Graminicola bengalensis</i>   | Large Grass Warbler             |  |  |  |
| 377 |                     | <i>Orthotomus sutorius</i>       | Common Tailor bird              |  |  |  |
| 378 |                     | <i>Megalurus palustris</i>       | Striated Marsh Warbler          |  |  |  |
| 379 |                     | <i>Acrocephalus bistrigiceps</i> | Black browed Reed Warbler       |  |  |  |
| 380 |                     | <i>Acrocephalus agricola</i>     | Paddyfield Warbler              |  |  |  |
| 381 |                     | <i>Acrocephalus concinens</i>    |                                 |  |  |  |
| 382 |                     | <i>Acrocephalus dumetorum</i>    | Blyth's Reed Warbler            |  |  |  |
| 383 |                     | <i>Acrocephalus stentoreus</i>   | Clamorous Reed Warbler          |  |  |  |

|     |                            |                                  |                                 |  |   |  |
|-----|----------------------------|----------------------------------|---------------------------------|--|---|--|
| 384 |                            | <i>Acrocephalus aedon</i>        | Thick billed Warbler            |  |   |  |
| 385 |                            | <i>Hippolais caligata</i>        | Booted warbler                  |  |   |  |
| 386 |                            | <i>Seicercus burkii</i>          | Golden spectacled Warbler       |  |   |  |
| 387 |                            | <i>Seicercus castaniceps</i>     | Chestnut-Crowned Warbler        |  |   |  |
| 388 |                            | <i>Seicercus xanthoscheistos</i> | Gray Headed Warbler             |  |   |  |
| 389 |                            | <i>Abroscopus superciliaris</i>  | Yellow bellied Warbler          |  |   |  |
| 390 |                            | <i>Phylloscopus occipitalis</i>  | Large Crowned Leaf Warbler      |  |   |  |
| 391 |                            | <i>Phylloscopus reguloides</i>   | Greenish warbler                |  |   |  |
| 392 |                            | <i>Phylloscopus cantator</i>     | Dull Green Leaf Warbler         |  |   |  |
| 393 |                            | <i>Phylloscopus magnirostris</i> | Large billed Leaf Warbler       |  |   |  |
| 394 |                            | <i>Phylloscopus inomatus</i>     | Yellow Warbler                  |  |   |  |
| 395 |                            | <i>Phylloscopus fuscatus</i>     | Dusky's Warbler                 |  |   |  |
| 396 |                            | <i>Phylloscopus fulgiventor</i>  | Smoky Warbler                   |  | S |  |
| 397 |                            | <i>Phylloscopus griseolus</i>    | Sulphur bellied Warbler         |  |   |  |
| 398 |                            | <i>Phylloscopus affinis</i>      | Tickell's Warbler               |  |   |  |
| 399 |                            | <i>Phylloscopus collybita</i>    | Chiff Chaff                     |  |   |  |
| 400 |                            | <i>Phylloscopus proregulus</i>   | Yellow-rumped Leaf Warbler      |  |   |  |
| 401 |                            | <i>Chaetornis striatus</i>       | Bristled Grass bird             |  |   |  |
| 402 |                            | <i>Sylvia curruca</i>            | Lesser Whitethroate             |  |   |  |
| 403 |                            | <i>Sylvia hortensis</i>          | Orphean Warbler                 |  |   |  |
| 404 | Muscicapidae (Flycatchers) | <i>Cyornis rubeculoides</i>      | Blue throated flycatcher        |  |   |  |
| 405 |                            | <i>Cyornis tickelliae</i>        | Tickell's Blue Flycatcher       |  |   |  |
| 406 |                            | <i>Cyornis poliogenyse</i>       |                                 |  |   |  |
| 407 |                            | <i>Muscicapa thalassina</i>      | Verditer Flycatcher             |  |   |  |
| 408 |                            | <i>Muscicapa sibirica</i>        | Asian Sooty Flycatcher          |  |   |  |
| 409 |                            | <i>Muscicapa latirostris</i>     | Brown Flycatcher                |  |   |  |
| 410 |                            | <i>Muscicapa ruficauda</i>       | Rusty-tailed Flycatcher         |  |   |  |
| 411 |                            | <i>Ficeluda superciliaris</i>    | White Browed Flycatcher         |  |   |  |
| 412 |                            | <i>Ficeluda tricolor</i>         | Blue flycatcher                 |  |   |  |
| 413 |                            | <i>Ficeluda huperythra</i>       | Rufous-breasted Blue Flycatcher |  |   |  |

|     |                                 |                                 |                                   |  |  |  |
|-----|---------------------------------|---------------------------------|-----------------------------------|--|--|--|
| 414 |                                 | <i>Ficeluda stophiata</i>       | Orange Gorgetted flycatcher       |  |  |  |
| 415 |                                 | <i>Ficeluda hodgsonii</i>       | Slaty backed Flycatcher           |  |  |  |
| 416 |                                 | <i>Ficeluda subrubra</i>        | Little Pied Flycatcher            |  |  |  |
| 417 |                                 | <i>Ficeluda westermanii</i>     | Red breasted Flycatcher           |  |  |  |
| 418 |                                 | <i>Culicicappa ceylonensis</i>  | Grey headed Flycatcher            |  |  |  |
| 419 |                                 | <i>Rhipidura hypoxantha</i>     | Yellow-bellied Fantail Flycatcher |  |  |  |
| 420 |                                 | <i>Rhipidura aureola</i>        | White-breasted Fantail Flycatcher |  |  |  |
| 421 |                                 | <i>Rhipidura albicollis</i>     | White throated fantail            |  |  |  |
| 422 |                                 | <i>Terpsiphone paradisi</i>     | Asian paradise Flycatcher         |  |  |  |
| 423 | Timaliidae (Babbler and Thrush) | <i>Pellorneus ruficeps</i>      | Spotted Babbler                   |  |  |  |
| 424 |                                 | <i>Pomatorhinus erythronys</i>  | Rusty-checked Schimter Babbler    |  |  |  |
| 425 |                                 | <i>Pomatorhinus schisticeps</i> | Slaty-headed Babbler              |  |  |  |
| 426 |                                 | <i>Pnoepyga pusilla</i>         | Lesser Scaly-breasted Babbler     |  |  |  |
| 427 |                                 | <i>Stachyris pyrrhops</i>       | Babbler-chinned Babbler           |  |  |  |
| 428 |                                 | <i>Stachyris nigriceps</i>      | Black-throated Babbler            |  |  |  |
| 429 |                                 | <i>Dumetia hyperythra</i>       | Rufous-bellied Babbler            |  |  |  |
| 430 |                                 | <i>Timelia pileata</i>          | Red-capped Babbler                |  |  |  |
| 431 |                                 | <i>Chrysomna sinensis</i>       | Yellow-eyed Babbler               |  |  |  |
| 432 |                                 | <i>Turdoides earlei</i>         | Striated Babbler                  |  |  |  |
| 433 |                                 | <i>Turdoides striatus</i>       | Jungle Babbler                    |  |  |  |
| 434 |                                 | <i>Turdoides longirostris</i>   | Slender-billed Babbler            |  |  |  |
| 435 |                                 | <i>Garrulax moniligerus</i>     | Lesser Necklaced Laughing Thrush  |  |  |  |
| 436 |                                 | <i>Garrulax pectoralis</i>      | Large Necklaced Laughing Thrush   |  |  |  |
| 437 |                                 | <i>Garrulax rufogularis</i>     | Rufous-chinned Laughing Thrush    |  |  |  |
| 438 |                                 | <i>Alcippe nipalensis</i>       | Abbott's Babbler                  |  |  |  |
| 439 |                                 | <i>Yuhina zantholeuca</i>       | White Bellied Yuhina              |  |  |  |
| 440 | Paridae (Tits)                  | <i>Parus ater</i>               | Great tit                         |  |  |  |

|     |                         |                                  |                              |  |  |  |
|-----|-------------------------|----------------------------------|------------------------------|--|--|--|
| 441 |                         | <i>Melanochlora sultanea</i>     | Sultan Tit                   |  |  |  |
| 442 | Sittidae (Nuthatch)     | <i>Sitta frontalis</i>           | Velvet-fronted Nuthatch      |  |  |  |
| 443 |                         | <i>Sitta castanea</i>            | Chestnut-bellied Nuthatch    |  |  |  |
| 444 | Nectarinidae (Sunbirds) | <i>Nectarinia asiatica</i>       | Purple Sunbird               |  |  |  |
| 445 |                         | <i>Aracchnothera longirostra</i> | Little spiderhunter          |  |  |  |
| 446 |                         | <i>Anthreptes singalensis</i>    | Rubycheek                    |  |  |  |
| 447 |                         | <i>Aethopyga saturata</i>        | Black-breasted Sunbird       |  |  |  |
| 448 |                         | <i>Aethopyga siparaji</i>        | Scarlet-breasted Sunbird     |  |  |  |
| 449 |                         | <i>Arachnothera magna</i>        | Streaked Spiderhunter        |  |  |  |
| 450 | Dicidae (Flowerpeckers) | <i>Dicaeum erythrorhynchus</i>   | Pale billed Flowerpecker     |  |  |  |
| 451 |                         | <i>Dicaeum agile</i>             | Thick billed Flowerpecker    |  |  |  |
| 452 |                         | <i>Dicaeum ignipectus</i>        | Free-breasted Flowerpecker   |  |  |  |
| 453 | Zosteropidae            | <i>Zosterops palpebrosa</i>      | Oriental white eyed          |  |  |  |
| 454 | Oriolidae (Orioles)     | <i>Oriolus xanthomus</i>         | Black hooded Oriole          |  |  |  |
| 455 |                         | <i>Oriolus oriolus</i>           | Golden Oriole                |  |  |  |
| 456 |                         | <i>Oriolustrailii</i>            | Maroon Oriole                |  |  |  |
| 457 |                         | <i>Oriole chinensis</i>          | Black napped Oriole          |  |  |  |
| 458 | Laniidae (Shrikes)      | <i>Lanius cristatus</i>          | Brown Shrike                 |  |  |  |
| 459 |                         | <i>Lanius vittatus</i>           | Bay backed Shrike            |  |  |  |
| 460 |                         | <i>Lanius tephronotus</i>        | Grey-backed Shrike           |  |  |  |
| 461 |                         | <i>Lanius schach</i>             | Long tailed Shrike           |  |  |  |
| 462 | Dicruridae (Drongo)     | <i>Dicrurus macrcercus</i>       | Black Drongo                 |  |  |  |
| 463 |                         | <i>Dicrurus caerulescens</i>     | White bellied Drongo         |  |  |  |
| 464 |                         | <i>Dicrurus annectans</i>        | Crow billed Drongo           |  |  |  |
| 465 |                         | <i>Dicrurus paradiseus</i>       | Greater Racket tailed Drongo |  |  |  |
| 466 |                         | <i>Dicrurus leucophaeus</i>      | Ashy Drongo                  |  |  |  |
| 467 |                         | <i>Dicrurus aeneus</i>           | Bronzed Drongo               |  |  |  |
| 468 |                         | <i>Dicrurus hottentottus</i>     | Spangled Drongo              |  |  |  |

|     |                                 |                                |                             |  |  |  |
|-----|---------------------------------|--------------------------------|-----------------------------|--|--|--|
| 469 |                                 | <i>Dicrurus remifer</i>        | Small Racquet-tailed Drongo |  |  |  |
| 470 | Artamidae (Wood Swallow)        | <i>Artamus fuscus</i>          | Ashy wood swallow           |  |  |  |
| 471 | Corvidae (Magpies)              | <i>Urocissa erythrorhyncha</i> | Red billed Blue Magpie      |  |  |  |
| 472 |                                 | <i>Dendrocitta vagabunda</i>   | Rufous Treepie              |  |  |  |
| 473 |                                 | <i>Cissa chinensis</i>         | Green Magpie                |  |  |  |
| 474 | (Crows)                         | <i>Corvus splendens</i>        | House crow                  |  |  |  |
| 475 |                                 | <i>Corvus macrorhynchos</i>    | Jungle crow                 |  |  |  |
| 476 | Sturnidae (Mynah and Starlings) | <i>Saroglossa spiloptera</i>   | Spot-winged Stare           |  |  |  |
| 477 |                                 | <i>Sturnus malabaricus</i>     | Chestnut tailed Starling    |  |  |  |
| 478 |                                 | <i>Sturnus pagodarum</i>       | Brahminy Satarling          |  |  |  |
| 479 |                                 | <i>Sturnus vulgaris</i>        | Common Starling             |  |  |  |
| 480 |                                 | <i>Sturnus contra</i>          | Asian Pied Starling         |  |  |  |
| 481 |                                 | <i>Acridotheres tristis</i>    | Common Mynah                |  |  |  |
| 482 |                                 | <i>Acridotheres lascus</i>     | Bank Myna                   |  |  |  |
| 483 |                                 | <i>Acridotheres fuscus</i>     | Jungle Mynah                |  |  |  |
| 484 |                                 | <i>Gracula religiosa</i>       | Hill Myna                   |  |  |  |
| 485 | Emberizidae (Bunting)           | <i>Emberiza spodocephala</i>   | Black faced Bunting         |  |  |  |
| 486 |                                 | <i>Emberiza fucata</i>         | Chestnut eared Bunting      |  |  |  |
| 487 |                                 | <i>Emberiza aureola</i>        | Yellow breasted Bunting     |  |  |  |
| 488 |                                 | <i>Emberiza rutila</i>         | ChesnutBunting              |  |  |  |
| 489 |                                 | <i>Emberiza bruniceps</i>      | Red headed Bunting          |  |  |  |
| 490 |                                 | <i>Melophus lathami</i>        | Crested Bunting             |  |  |  |

Source: Nepal Biodiversity Resource Book (2007)

#### Annex IV: List of Herpetofauna in PNP

| SN | Scientific Names                | Local Names           | Family              | CITES | IUCN | NRDB |
|----|---------------------------------|-----------------------|---------------------|-------|------|------|
|    | ORDER : ANURA                   |                       |                     |       |      |      |
| 1  | <i>Kaloula pulchra</i>          | Painted bullfrog      | <i>Microhylidae</i> |       |      |      |
| 2  | <i>Rana crassa</i>              | Jerdons Bull Frog     | <i>Microhylidae</i> |       |      |      |
| 3  | <i>Uperodon globulosus</i>      | Globular frog         | <i>Microhylidae</i> |       |      |      |
|    | ORDER : SAURIA                  |                       |                     |       |      |      |
| 4  | <i>Mabuya macularia</i>         | Speckled Forest Skink | <i>Scincidae</i>    |       |      |      |
| 5  | <i>Calotes versicolor</i>       | Common Garden Lizard  | <i>Agamidae</i>     |       |      |      |
| 6  | <i>Varanus bengalensis</i>      | Monitor Lizard        | <i>Varanidae</i>    |       | S    |      |
| 7  | <i>Varanus flavescens</i>       | Golden Monitor        | <i>Varanidae</i>    | I     |      | S    |
|    | ORDER : SERPENTES               |                       |                     |       |      |      |
| 8  | <i>Rhamphotyphlops braminus</i> | Brahminy Blind Snake  | <i>Typhlopidae</i>  |       |      |      |
| 9  | <i>Eryx conicus</i>             | Russell's Earth Boa   | <i>Boidae</i>       |       |      |      |
| 10 | <i>Python molurus</i>           | Asiatic Rock Python   | <i>Boidae</i>       |       |      |      |
| 11 | <i>Bungarus caeruleus</i>       | Blue Krait            | <i>Elapidae</i>     |       |      |      |
| 12 | <i>Bungarus fasciatus</i>       | Banded Krait          | <i>Elapidae</i>     |       |      |      |
| 13 | <i>Naja naja</i>                | Common Cobra          | <i>Elapidae</i>     |       |      |      |
| 14 | <i>Ophiophagus hannah</i>       | King Cobra            | <i>Elapidae</i>     | III   |      | V    |
| 15 | <i>Ptyas mucosus</i>            | Asiatic Rat Snake     | <i>Colubridae</i>   |       |      | S    |

Source: BPP (1995 No. 12)

### Annex V: List of Fishes reported in PNP

| SN                        | Order/Family/Local Names | Scientific Names      | NRDB | Region | Sites |
|---------------------------|--------------------------|-----------------------|------|--------|-------|
|                           | ORDER: CLUPEIFORMES      |                       |      |        |       |
|                           | Family - Clupeidae       |                       |      |        |       |
| 1                         | Suia, Sidhri             | Gudusia chapra        |      | TS     | 6     |
| 2                         | Suia                     | Gudusia godanahiae    |      |        | 5     |
|                           | Family - Notopteridae    |                       |      |        |       |
| 3                         | Golhi, Patara, Mohi      | Notopterus notopterus |      | TS     | 8     |
|                           | ORDER : CYPRINIFORMES    |                       |      |        |       |
|                           | Family - Cyprinidae      |                       |      |        |       |
| 4                         | Bhakur, Katla            | Catla catla           |      | TS     | 5     |
| 5                         | Naini, Mrigal, Jhilke    | Cirrhinus mrigala     |      | TS     | 5     |
| 6                         | Rewa                     | Cirrhinus reba        |      | TS     | 8     |
| 7                         | Kande, Bhatti, Sidhri    | Puntius sarana        |      |        | 6     |
| 8                         | Pothi, Sidhri            | Puntius sophore       |      |        | 6     |
| Source: BPP (1995 No. 12) |                          |                       |      |        |       |

## Annex VI: List of Butterflies of PNP

| SN | Family       | Scientific Name              | Common Name          |
|----|--------------|------------------------------|----------------------|
| 1  | Danidae      | <i>Danaus chrysippus</i>     | Plain Tiger          |
| 2  |              | <i>Euploea core</i>          | Common Indian Crow   |
| 3  |              | <i>Parantica melaneus</i>    | Chocolate Tiger      |
| 4  | Hesperiidae  | <i>Borbo cinnara</i>         | Rice Swift           |
| 5  |              | <i>Caprona agama</i>         | Spotted Angle        |
| 6  |              | <i>Oriens goloides</i>       | Ceylon Darltlet      |
| 7  |              | <i>Sarangesa dasahara</i>    | Common Small Flat    |
| 8  | Lacaenidae   | <i>Spindasis vulcanus</i>    | Common Silverline    |
| 9  |              | <i>Zizeeria karsandra</i>    | Dark Grass Blue      |
| 10 |              | <i>Zizeeria maha</i>         | Pale Grass Blue      |
| 11 | Nymphalidae  | <i>Ariadne merione</i>       | Common Castor        |
| 12 |              | <i>Athyma perius</i>         | Common Sergeant      |
| 13 |              | <i>Cupha erymanthis</i>      | Rustic               |
| 14 |              | <i>Hypolimnas bolina</i>     | Great Eggfly         |
| 15 |              | <i>Hypolimnas misippus</i>   | Danaid Eggfly        |
| 16 |              | <i>Neptis hylas</i>          | Common Sailer        |
| 17 |              | <i>Precis almana</i>         | Peacock Pansy        |
| 18 |              | <i>Precis hierta</i>         | Yelllow Pansy        |
| 19 |              | <i>Precis lemonias</i>       | Lemon Pansy          |
| 20 |              | <i>Tanaecia lepidea</i>      | Common Earl          |
| 21 | Papilionidae | <i>Chilasa clytia</i>        | Common Mime          |
| 22 |              | <i>Papilio demoleus</i>      | Line Swallowtail     |
| 23 |              | <i>Papilio polytess</i>      | Common Mormon        |
| 24 | Pieridae     | <i>Catopsilia pyranthe</i>   |                      |
| 25 |              | <i>Eurema hacabe</i>         |                      |
| 26 | Satyridae    | <i>Elymnias hypermnestra</i> | Common Palmfly       |
| 27 |              | <i>Melanitis leda</i>        | Common Evening Brown |
| 28 |              | <i>Mycalesis mamerta</i>     | Blind Eye Bushbrown  |
| 29 |              | <i>Mycalesis mineas</i>      |                      |
| 30 |              | <i>Orsotrioena medus</i>     | Jungle Brown         |
| 31 |              | <i>Ypthima baldus</i>        | Common Five Ring     |

Source: Budha et. al. (1998).

**Annex VII-A: Gazetement regarding status of reserve changed to the NP**

**खण्ड ६७) संख्या १४ नेपाल राजपत्र भाग ५ मिति २०७४।३।१९**

**नेपाल सरकार  
वनतथा भू-संरक्षण मन्त्रालयको सूचना**

नेपाल सरकारले राष्ट्रिय निकुञ्ज तथावन्यजन्तु संरक्षण ऐन, २०२९ को दफा ३ को उपदफा (१) बमोजिमपर्सा वन्यजन्तु आरक्षको साविकबमोजिमको क्षेत्रफल र चार किल्लाकायम राखी यस आरक्षलाई "पर्सा राष्ट्रिय निकुञ्ज" घोषणा गरेकाले यो सूचनाप्रकाशनगरिएको छ ।

आज्ञाले,  
प्रकाशमाथेमा  
नेपाल सरकारको सचिव

## **Annex VII-B: Boundary of the Park and BZ**

**North:** Hasta Khola and Rapti River

**East:** Bhedaha Khola running southward from churia ridge up to fire-line of Aadhavar

**South:** 36 Km fire-line extending westward from Aadhavar and some part of east west highway

**West:** CNP and Hasta Khola

The northern boundary of the Park starts from the junction of Hasta Khola and Rapti River and extends eastwards with the northern branch of the Rapti River to Bagau Khola, and runs further east along main Siwalik (Churia) ridges up to the origin of Bhedaha Khola. The legal boundary line in the east is Bhedaha Khola, which runs southward from Churia ridge to the fire line near Aadhavar. However, in practice because of higher concentration of wildlife and location of headquarters, a portion of the East-West Highway (Hetauda-Pathalaiya-Birgunj road) is regarded as eastern boundary. A 36 km long fire line, extending westward from Aadhavar, makes southern boundary. In the west, the Park borders with CNP and Hasta Khola in the north and Doharam Khola in the south separate the PNP from the CNP.

### **BZ**

Starting from Churia Mai and going through Dudhaura stream to the fire line of Dudhaura from Majauna. It follows the same fire line to Bedaha stream crossing Mahendra highway. Bhedaha river meets fire line of Aadhavar-Nirmalbasti and five hundred meter south point of the river that runs towards the east of Mahendra highway and runs to Jitpur VDC up to Ward no. 4 of Nagaul village.

### Annex VIII-A: Activities and budget of five year management plan

| SN   | Activities                                                                                                                                                  | Unit | No. | Rate  | Amount | 1st Year | 2nd Year | 3rd Year | 4th Year | 5th Year | Total Amount |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|-------|--------|----------|----------|----------|----------|----------|--------------|
| 1    | Park Protection                                                                                                                                             |      |     |       |        |          |          |          |          |          |              |
| 1.1  | Construct 2 additional office quarters for staffs in Aadhavar                                                                                               | No.  | 2   | 10000 | 20000  | 6667     | 7000     | 7700     |          |          | 21367        |
| 1.2  | Construction of 8 additional joint posts guard posts (Ratmate, Jamunia, Churiamai, Ghodemasan, Halkhoriya, Parkibas, Dillipur and Sitalpur) for PNP staffs; | No.  | 8   | 3500  | 28000  | 5600     | 5880     | 6160     | 6440     | 6720     | 30800        |
| 1.3  | Construct 1 snake bite medical service centre in Nirmalbasti;                                                                                               |      | 1   | 1500  | 1500   |          | 1500     |          |          |          | 1500         |
| 1.4  | Renovate 10 office buildings and posts;                                                                                                                     | No.  | 10  | 400   | 4000   | 800      | 840      | 880      | 920      | 960      | 4400         |
| 1.5  | Repair and maintenance of office buildings in HQ, Sector office, Range post, Guard post and security posts including fencing;                               | No.  | 15  | 200   | 3000   | 600      | 630      | 660      | 690      | 720      | 3300         |
| 1.6  | Maintain kitchen, toilet and fence of posts and sector office regularly;                                                                                    | No.  | 20  | 100   | 2000   | 400      | 420      | 440      | 460      | 480      | 2200         |
| 1.7  | Procure water filter to provide clean and safe drinking water to staff stationed at posts;                                                                  | No.  | 10  | 75    | 750    | 150      | 158      | 165      | 173      | 180      | 825          |
| 1.8  | Construct 2 checkpoint units at Pathlaiya and Churiamai;                                                                                                    | No.  | 2   | 1000  | 2000   | 1000     | 1050     |          |          |          | 2050         |
| 1.9  | Construct 11 Km overhead bridges in coordination with Department of Road (DoR);                                                                             | Km   | 11  |       |        |          |          |          |          |          |              |
| 1.1  | Support DoR to conduct feasibility study to construct underpass and overpass in the highway going through core area;                                        | No.  | 5   | 350   | 1750   | 350      | 368      | 385      | 403      | 420      | 1925         |
| 1.11 | Upgrade existing 240 (212 existing, improvement 28 of Bhata-                                                                                                | Km   | 240 | 175   | 42000  | 8400     | 8820     | 9240     | 9660     | 10080    | 46200        |

|      |                                                                                                            |       |     |      |       |      |      |      |      |      |       |
|------|------------------------------------------------------------------------------------------------------------|-------|-----|------|-------|------|------|------|------|------|-------|
|      | Shitalpur-Pratapur) Km fire line to all-weather road networks inside the Park;                             |       |     |      |       |      |      |      |      |      |       |
| 1.12 | Construct 50 Km track road on the foothill of Chure;                                                       | Km    | 50  | 250  | 12500 | 2500 | 2625 | 2750 | 2875 | 3000 | 13750 |
| 1.13 | Maintenance of 125 km of fire line throughout the year;                                                    | Km    | 125 | 100  | 12500 | 2500 | 2625 | 2750 | 2875 | 3000 | 13750 |
| 1.14 | Construct 5 RCC Ambush towers in sensitive from security point of view and use them during night camps;    | No.   | 5   | 500  | 2500  | 500  | 525  | 550  | 575  |      | 2150  |
| 1.15 | Repair and maintain existing 22 watch towers;                                                              | Year  | 22  | 150  | 3300  | 30   | 32   | 33   | 35   | 36   | 165   |
| 1.16 | Construct 15 wooden bridge with RCC or cement mortar foundation;                                           | No.   | 15  | 300  | 4500  | 60   | 63   | 66   | 69   | 72   | 330   |
| 1.17 | Repair and maintain of 15 existing wooden bridges                                                          | No.   | 15  | 100  | 1500  | 20   | 21   | 22   | 23   | 24   | 110   |
| 1.18 | Construct 5 RCC causeway;                                                                                  | No.   | 5   | 200  | 1000  | 40   | 42   | 44   | 46   | 48   | 220   |
| 1.19 | Support district electricity authority to electrify Mahadev posts, Bhata, Shkaribas and Dudhaura;          | No.   | 5   | 50   | 250   | 10   | 11   | 11   | 12   | 12   | 55    |
| 1.2  | Undertake meeting with mobile companies and install 3 Base Transceiver Station (BTS) inside the Park;      | No.   | 3   | 100  | 300   | 60   | 63   | 66   |      |      | 189   |
| 1.21 | Install walky-talky radio communication throughout the Park including repair and maintenance;              | Times | 1   | 1500 | 1500  | 750  | 788  |      |      |      | 1538  |
| 1.22 | Install additional 25 CCTV cameras in the highway from Amlekhgunj to Pathlaiya and Pathlaiya to Tamaghadi; | No.   | 25  | 45   | 1125  | 225  | 236  | 248  | 259  | 270  | 1238  |
| 1.23 | Install 25 spy camera (poacher's cam) at strategic location;                                               | No.   | 15  | 75   | 1125  | 375  | 394  | 413  |      |      | 1181  |
| 1.24 | Repair and maintain CCTV and Spy camera on yearly basis                                                    | Times | 5   | 300  | 1500  | 300  | 315  | 330  | 345  | 360  | 1650  |

|      |                                                                                                                                                 |       |    |      |       |     |      |      |      |      |       |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------|-------|----|------|-------|-----|------|------|------|------|-------|
| 1.25 | Undertake patrolling (short, medium and long range), camping and sweeping operation by a joint team from headquarters and sector;               | Times | 15 | 300  | 4500  | 900 | 945  | 990  | 1035 | 1080 | 4950  |
| 1.26 | Implement real time and SMART patrolling with changing the time and route on random basis;                                                      | Years | 5  | 250  | 1250  | 250 | 263  | 275  | 288  | 300  | 1375  |
| 1.27 | Conduct long-term surveillance of suspected area and persons;                                                                                   | Years | 5  | 500  | 2500  | 500 | 525  | 550  | 575  | 600  | 2750  |
| 1.28 | Implement information purchasing mechanism through informants;                                                                                  | Years | 5  | 600  | 3000  | 600 | 630  | 660  | 690  | 720  | 3300  |
| 1.29 | Institutionalize district level WCCB formed at three districts, viz. Parsa, Bara and Makwanpur;                                                 | Years | 5  | 200  | 1000  | 200 | 210  | 220  | 230  | 240  | 1100  |
| 1.3  | Undertake meetings and exchange visit, information sharing mechanism to strengthen trans-boundary cooperation and coordination with VTR, India; | Years | 5  | 250  | 1250  | 250 | 263  | 275  | 288  | 300  | 1375  |
| 1.31 | Procure metal detector to identify iron set leg traps probably used by poachers to trap wildlife (especially for tiger);                        | No.   | 15 | 250  | 3750  | 750 | 788  | 825  | 863  | 900  | 4125  |
| 1.32 | Procure 4 long hour flying drone to monitor sensitive areas;                                                                                    | No.   | 4  | 300  | 1200  | 300 | 1260 | 1320 | 345  |      | 3225  |
| 1.33 | Procure 4 thermal cameras that can take picture in the night;                                                                                   | No.   | 4  | 120  | 480   | 120 | 504  | 528  | 138  |      | 1290  |
| 1.34 | Procure 50 cycles;                                                                                                                              | No.   | 50 | 8    | 400   | 80  | 84   | 88   | 92   | 96   | 440   |
| 1.35 | Procure 15 motorbikes;                                                                                                                          | No.   | 15 | 250  | 3750  | 750 | 788  | 825  | 863  | 900  | 4125  |
| 1.36 | Demarcate PNP and Settlement area;                                                                                                              | Times | 5  | 500  | 2500  | 500 | 525  | 550  | 575  | 600  | 2750  |
| 1.37 | Procure 4 four-wheel vehicles for both Park and Security Unit for Ratanpuri area and monitoring of problem wildlife;                            | No.   | 4  | 7500 | 30000 |     | 7500 | 8250 | 8250 | 8250 | 32250 |
| 1.38 | Procure 20 night vision binoculars;                                                                                                             | No.   | 20 | 35   | 700   | 140 | 147  | 154  | 161  | 168  | 770   |

|          |                                                                                                                                                 |       |     |     |       |              |              |              |              |              |               |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|-----|-------|--------------|--------------|--------------|--------------|--------------|---------------|
|          | and                                                                                                                                             |       |     |     |       |              |              |              |              |              |               |
| 1.39     | Undertake auction to dispose old, unworkable and rusty vehicles and motorbike through the legal.                                                | Times | 1   | 250 | 250   | 250          |              |              |              |              | 250           |
|          | <b>Sub Total</b>                                                                                                                                |       |     |     |       | <b>36927</b> | <b>48834</b> | <b>48422</b> | <b>40249</b> | <b>40536</b> | <b>214967</b> |
| <b>2</b> | <b>Habitat management</b>                                                                                                                       |       |     |     |       |              |              |              |              |              |               |
| 2.1      | Undertake spatial mapping and update information of grasslands                                                                                  | Times | 2   | 300 | 600   |              | 315          |              | 345          |              | 660           |
| 2.2      | Undertake mapping of AIS and woody perennial species;                                                                                           | Times | 2   | 500 | 1000  | 500          |              |              |              | 600          | 1100          |
| 2.3      | Recover 500 hectares of new grasslands by removing woody species;                                                                               | Ha.   | 500 | 50  | 25000 | 5000         | 5250         | 5500         | 5750         | 6000         | 27500         |
| 2.4      | Cut trees to open up sixty percent canopy for sprouting grassland for 500 ha. especially in the dry Sal forest;                                 | Ha.   | 100 | 20  | 2000  | 400          | 420          | 440          | 460          | 480          | 2200          |
| 2.5      | Uprooting and burning invasive species in at least 500 hectares from the critical habitats;                                                     | Ha.   | 500 | 10  | 5000  | 1000         | 1050         | 1100         | 1150         | 1200         | 5500          |
| 2.6      | Manage 700 hectare of existing grasslands by manual cutting of seedlings, sapling and trees, uprooting and/or controlled burning;               | Ha.   | 700 | 30  | 21000 | 4200         | 4410         | 4620         | 4830         | 5040         | 23100         |
| 2.7      | Clean at least 30 m shrub and trees, to promote grassland, along both sides of forest road/fire line for 150 km for the visibility of wildlife; | Ha.   | 600 | 20  | 12000 | 2400         | 2520         | 2640         | 2760         | 2880         | 13200         |
| 2.8      | Maintain and repair mechanical grass cutting equipment;                                                                                         | Times | 5   | 500 | 2500  | 500          | 525          | 550          | 575          | 600          | 2750          |
| 2.9      | Organize Kharkhadai of 3 days to allow local people to collect grass and thatches with strict monitoring and supervision; and                   | Years | 5   | 50  | 250   | 50           | 53           | 55           | 58           | 60           | 275           |
| 2.1      | Pilot at least one grassland by                                                                                                                 | Years | 5   | 350 | 1750  | 350          | 368          | 385          | 403          | 420          | 1925          |

|             |                                                                                                                                       |       |    |      |       |      |      |      |      |      |       |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------|-------|----|------|-------|------|------|------|------|------|-------|
|             | ploughing and cultivating cash crops, planting bamboos and if possible plant a wild banana for Wild elephants.                        |       |    |      |       |      |      |      |      |      |       |
| <b>2.11</b> | <b>Wetlands</b>                                                                                                                       |       |    |      |       |      |      |      |      |      |       |
| 2.12        | Undertake inventory and spatial mapping of wetlands and water holes                                                                   | No.   | 2  | 500  | 1000  | 500  |      |      |      | 600  | 1100  |
| 2.13        | Construct 12 intakes in the upstream of Churia in the northern side of the Park by constructing RCC or Cement Mortar dam              | No.   | 12 | 200  | 2400  | 480  | 504  | 528  | 552  | 576  | 2640  |
| 2.14        | Construct 5 large water recharge ponds below the intake at the foot-hills of Churia;                                                  | No.   | 5  | 1500 | 7500  | 1500 | 1575 | 1650 | 1725 | 1800 | 8250  |
| 2.15        | Construct additional 25 PCC ponds near the forest road/fire lines                                                                     | No.   | 25 | 250  | 6250  | 1250 | 1313 | 1375 | 1438 | 1500 | 6875  |
| 2.16        | Pilot 5 solar water pump to supply water in the water holes;                                                                          | No.   | 10 | 400  | 4000  | 800  | 840  | 880  | 920  | 960  | 4400  |
| 2.17        | Clean and remove weeds in wetlands and maintain cemented water holes by and supply water by water tanker                              | No.   | 80 | 150  | 12000 | 2400 | 2520 | 2640 | 2760 | 2880 | 13200 |
| 2.18        | Clean and remove weeds in Kamini daha, Kali daha, Lauki daha and Halkhoriya and renovate annually to prevent from further degradation | No.   | 25 | 1500 | 37500 | 7500 | 7875 | 8250 | 8625 | 9000 | 41250 |
| 2.19        | Repair and maintenance of dyke below rambhori                                                                                         | No.   | 1  | 1000 | 1000  | 1000 |      | 1100 | 1150 | 1200 | 4450  |
| 2.2         | Repair and maintain tank in Mahadev khola and extend additional one                                                                   | No.   | 1  | 2000 | 2000  |      | 2100 |      |      |      | 2100  |
| 2.21        | Conduct water quality monitoring of rivers, lakes and water holes at regular interval                                                 | Times | 5  | 100  | 500   | 100  | 105  | 110  | 115  | 120  | 550   |
| 2.22        | Procure high density water tanks to                                                                                                   | No.   | 15 | 75   | 1125  | 225  | 236  | 248  | 259  | 270  | 1238  |

|          |                                                                                                   |       |    |      |      |              |              |              |              |              |               |
|----------|---------------------------------------------------------------------------------------------------|-------|----|------|------|--------------|--------------|--------------|--------------|--------------|---------------|
|          | store water for dry seasons                                                                       |       |    |      |      |              |              |              |              |              |               |
| 2.23     | Repair and maintenance of existing water tank vehicle                                             | Times | 5  | 1000 | 5000 | 1000         | 1050         | 1100         | 1150         | 1200         | 5500          |
| 2.24     | Document use of indigenous knowledge, skills and practices on wise use of wetland resources in BZ | No.   | 1  | 500  | 500  |              | 525          |              |              |              | 525           |
| 2.25     | Celebrate world Wetland Day on February 02.                                                       | Times | 5  | 250  | 1250 | 250          | 263          | 275          | 288          | 300          | 1375          |
|          | <b>Sub Total</b>                                                                                  |       |    |      |      | <b>31405</b> | <b>33815</b> | <b>33446</b> | <b>35311</b> | <b>37686</b> | <b>171663</b> |
| <b>3</b> | <b>Fire Control</b>                                                                               |       |    |      |      |              |              |              |              |              |               |
| 3.1      | Identify and map fire prone areas                                                                 | No.   | 2  | 500  | 1000 | 500          |              |              |              | 600          | 1100          |
| 3.2      | Prepare and implement fire management action plan                                                 | No.   | 1  | 500  | 500  |              |              |              | 575          |              | 575           |
| 3.3      | Clear fire line or undertake control burning in the fire lines before the onset of fire season    | Times | 5  | 750  | 3750 | 750          | 788          | 825          | 863          | 900          | 4125          |
| 3.4      | Train Park staff and security personnel and BZCF members for firefighting                         | Times | 2  | 250  | 500  |              | 250          |              | 288          |              | 538           |
| 3.5      | Provide firefighting equipment to Park post and BZCFs                                             | Times | 1  | 50   | 50   |              | 25           | 25           |              |              | 50            |
| 3.6      | Carry out fire prevention education and awareness activities through interaction                  | Year  | 5  | 100  | 500  | 100          | 105          | 110          | 115          | 120          | 550           |
| 3.7      | Mobilize fire-fighting team with equipment in order to stop spreading of fire in grasslands       | Times | 5  | 500  | 2500 | 500          | 525          | 550          | 575          | 600          | 2750          |
| 3.8      | Prepare fire occurrence reporting and statistical databases                                       | Year  | 5  | 50   | 250  | 50           | 53           | 55           | 58           | 60           | 275           |
| 3.9      | Construct 30 Km fire line                                                                         | Km    | 30 | 200  | 6000 | 1200         | 1260         | 1320         | 1380         | 1440         | 6600          |
|          | <b>Sub Total</b>                                                                                  |       |    |      |      | <b>3100</b>  | <b>3005</b>  | <b>2885</b>  | <b>3853</b>  | <b>3720</b>  | <b>16563</b>  |
| <b>4</b> | <b>Wildlife Health Management</b>                                                                 |       |    |      |      |              |              |              |              |              |               |
| 4.1      | Develop wildlife health management plan or guideline for PNP                                      | No.   | 1  | 500  | 500  |              |              | 550          |              |              | 550           |

|      |                                                                                                                                                                                             |       |    |       |       |              |              |              |              |              |              |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----|-------|-------|--------------|--------------|--------------|--------------|--------------|--------------|
| 4.2  | Construct wildlife health centre to provide veterinary services                                                                                                                             | No.   | 1  | 7500  | 7500  |              |              | 2500         | 2875         | 3000         | 8375         |
| 4.3  | Construct 2 wildlife orphanage and rescue facility in both the sectors to accommodate more problem animals;                                                                                 | No.   | 2  | 6000  | 12000 |              |              | 6000         | 6900         |              | 12900        |
| 4.4  | Construct a large open enclosure with multiple partition for keeping additional problem tigers or leopards in Parsa Zoologica garden;                                                       | No.   | 1  | 20000 | 20000 | 4000         | 4200         | 4400         | 4600         | 4800         | 22000        |
| 4.5  | Procure 1 wildlife rescue vehicle;                                                                                                                                                          | No.   | 1  | 7500  | 7500  | 3750         | 3750         |              |              |              | 7500         |
| 4.6  | Procure 1 wildlife ambulance                                                                                                                                                                | No.   | 1  | 10000 | 10000 |              |              |              | 10000        |              | 10000        |
| 4.7  | Procurement equipment to establish laboratory in Aadhavar                                                                                                                                   | No.   | 1  | 1500  | 1500  | 1500         |              |              |              |              | 1500         |
| 4.8  | Carry out regular checkup for captive elephants at Hattisar and treat them;                                                                                                                 | Times | 5  | 250   | 1250  | 250          | 263          | 275          | 288          | 300          | 1375         |
| 4.9  | Coordinate Veterinary Hospital and Livestock Service Expert Centre and conservation partner to provide vaccine to livestock against potential diseases that can be transferred to wildlife; | Times | 5  | 275   | 1375  | 275          | 289          | 303          | 316          | 330          | 1513         |
| 4.1  | Undertake postmortem of all the deceased wild animal;                                                                                                                                       | Times | 5  | 50    | 250   | 50           | 53           | 55           | 58           | 60           | 276          |
| 4.11 | Provide food for injured or orphaned wildlife;                                                                                                                                              | Years | 5  | 1500  | 7500  | 1500         | 1575         | 1654         | 1733         | 1811         | 8273         |
| 4.12 | Provide support to look after wildlife orphanages and rescue facilities.                                                                                                                    | Years | 5  | 260   | 1300  | 260          | 273          | 287          | 300          | 314          | 1434         |
|      | <b>Sub Total</b>                                                                                                                                                                            |       |    |       |       | <b>11585</b> | <b>10402</b> | <b>16023</b> | <b>27069</b> | <b>10616</b> | <b>75695</b> |
|      | Encroachment control                                                                                                                                                                        |       |    |       |       |              |              |              |              |              |              |
| 4.14 | Update encroachment records in both park and BZ                                                                                                                                             | Times | 5  | 250   | 1250  | 250          | 263          | 275          | 288          | 300          | 1375         |
| 4.15 | Issue notice to evacuate the encroached area on a regular basis                                                                                                                             | Times | 10 | 75    | 750   | 150          | 158          | 165          | 173          | 180          | 825          |

|            |                                                                                                                                                                         |      |     |      |       |              |              |              |              |              |              |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-------|--------------|--------------|--------------|--------------|--------------|--------------|
| 4.16       | Relocate settlement from encroached area to outside of the PA to discourage fragmentation and increase grassland habitat                                                | HH   | 100 | 500  | 50000 | 10000        | 10500        | 11000        | 11500        | 12000        | 55000        |
| 4.17       | Conduct district level meeting to resolve encroachment problem                                                                                                          | No.  | 15  | 125  | 1875  | 375          | 394          | 413          | 431          | 450          | 2063         |
|            | <b>Sub Total</b>                                                                                                                                                        |      |     |      |       | <b>10775</b> | <b>11314</b> | <b>11853</b> | <b>12391</b> | <b>12930</b> | <b>59263</b> |
| <b>5</b>   | <b>HWC</b>                                                                                                                                                              |      |     |      |       |              |              |              |              |              |              |
| 5.1        | Implement conservation awareness activities to minimize HWC                                                                                                             | Year | 5   | 800  | 4000  | 800          | 840          | 880          | 920          | 1104         | 4544         |
| 5.2        | Provide support to construct improved animal shelter                                                                                                                    | HH   | 150 | 30   | 4500  | 900          | 945          | 990          | 1035         | 1242         | 5112         |
| 5.3        | Introduce high value crops that are not favored by wildlife;                                                                                                            | HH   | 150 | 25   | 3750  | 750          | 787.5        | 825          | 862.5        | 1035         | 4260         |
| 5.4        | Distribute wildlife deterring lights to BZCFs                                                                                                                           | No.  | 250 | 10   | 2500  | 500          | 525          | 550          | 575          | 690          | 2840         |
| 5.5        | Provide support to establish smart light at sensitive areas;                                                                                                            | No.  | 15  | 250  | 3750  | 750          | 787.5        | 825          | 862.5        | 1035         | 4260         |
| 5.6        | Erect 20 Km solar fence to prevent elephant strayed in the settlement especially in those areas where conflict is severe thereby reducing human-wild elephant conflict; | Km   | 20  | 500  | 10000 | 2000         | 2100         | 2200         | 2300         | 2760         | 11360        |
| 5.7        | Construct 25 Km of mesh jali to stop wildlife entering into the settlements and farm land;                                                                              | Km   | 25  | 200  | 5000  | 1000         | 1050         | 1100         | 1150         | 1380         | 5680         |
| 5.8        | Maintenance and repair of 30 Km of solar fence and Mesh Jali fence forming repair and maintenance committee; and                                                        | Km   | 30  | 50   | 1500  | 300          | 315          | 330          | 345          | 414          | 1704         |
| 5.9        | Carry out piloting of early warning system for Wild elephants                                                                                                           | No.  | 3   | 1500 | 4500  | 1500         |              | 1650         |              | 1800         | 4950         |
|            | <b>Sub Total</b>                                                                                                                                                        |      |     |      |       | <b>8500</b>  | <b>7350</b>  | <b>9350</b>  | <b>8050</b>  | <b>11460</b> | <b>44710</b> |
| <b>6</b>   | <b>Research, monitoring and capacity building</b>                                                                                                                       |      |     |      |       |              |              |              |              |              |              |
| <b>6.1</b> | <b>Research</b>                                                                                                                                                         |      |     |      |       |              |              |              |              |              |              |

|              |                                                                                                                                                                                               |       |   |     |     |            |            |            |            |             |             |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|---|-----|-----|------------|------------|------------|------------|-------------|-------------|
| <b>6.1.1</b> | <b>Habitat management</b>                                                                                                                                                                     |       |   |     |     |            |            |            |            |             |             |
|              | Study on vegetation dynamics and its impact on wildlife habitat                                                                                                                               | Times | 1 | 300 | 300 | 300        |            |            |            |             | 300         |
|              | Undertake study to identify suitable mechanical grass cutting machine                                                                                                                         | Times | 1 | 350 | 350 |            |            |            | 403        |             | 403         |
|              | Conduct study towards impact of habitat fragmentation and degradation on wildlife populations                                                                                                 | Times | 2 | 300 | 600 |            | 315        |            |            | 360         | 675         |
|              | Study grassland management practices and its impact on conservation with special focus on requirement of ungulates                                                                            | Times | 1 | 350 | 350 |            |            | 385        |            |             | 385         |
|              | Conduct research in a regular basis to understand grasslands dynamics                                                                                                                         | Times | 2 | 400 | 800 | 267        |            |            |            | 320         | 587         |
|              | Impact of IAS in wildlife and its habitat and experimental research to control it                                                                                                             | Times | 1 | 450 | 450 |            |            |            | 518        |             | 518         |
|              | Carry out study of corridors and connectivity upto Bagmati river of Rautahat                                                                                                                  | Times | 1 | 500 | 500 |            | 525        |            |            |             | 525         |
|              | Study land cover change using geo information and earth observation science                                                                                                                   | Times | 1 | 500 | 500 |            |            |            |            | 600         | 600         |
|              | Conduct research on facilitating water and land use planning and management; and                                                                                                              | Times | 1 | 400 | 400 |            |            | 440        |            |             | 440         |
|              | <b>Sub total</b>                                                                                                                                                                              |       |   |     |     | <b>567</b> | <b>840</b> | <b>825</b> | <b>920</b> | <b>1280</b> | <b>4432</b> |
| <b>6.1.2</b> | <b>Species Conservation</b>                                                                                                                                                                   |       |   |     |     |            |            |            |            |             |             |
|              | Update digital database maps using latest topo sheets, satellite imageries and aerial photographs for updating Wild elephant, tiger, rhinoceros, Gaur bison, Wild dog and Four horn antelope; | Year  | 1 | 300 | 300 |            |            |            |            | 360         | 360         |
|              | Study of distribution and                                                                                                                                                                     | Times | 1 | 300 | 300 |            |            | 330        |            |             | 330         |

|  |                                                                                                                                                                                 |       |   |     |     |     |     |     |     |     |     |
|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|---|-----|-----|-----|-----|-----|-----|-----|-----|
|  | abundance of various prey base species;                                                                                                                                         |       |   |     |     |     |     |     |     |     |     |
|  | Carry out study of seasonal migration of wildlife using GIS and Remote Sensing (Tiger, Rhino, Wild elephant etc                                                                 | Times | 1 | 350 | 350 |     |     |     | 420 |     | 420 |
|  | Study the status of human-wildlife conflict mainly with tigers and Wild elephant                                                                                                | Year  | 1 | 300 | 300 |     | 300 |     |     |     | 300 |
|  | Undertake intensive research on trans boundary movement of Wild elephants and tigers and the use of corridors, BZ areas and human settlement through satellite radio telemetry; | Times | 1 | 350 | 350 |     |     | 385 |     |     | 385 |
|  | Study the status of human-wildlife conflict mainly with tigers and Wild elephant;                                                                                               | Times | 1 | 350 | 350 |     |     |     |     | 420 | 420 |
|  | Conduct study on movement and ranging behavior of Wild elephant with special focus on human-wildlife conflict;                                                                  | Times | 1 | 300 | 300 |     | 300 |     |     |     | 300 |
|  | Carry out study of seasonal migration of wildlife using GIS and Remote Sensing (Tiger, Rhino, Wild elephant etc.);                                                              | Times | 2 | 350 | 700 | 350 |     |     |     | 420 | 770 |
|  | Conduct studies on the scale, extent and local variations in the intensity of human-tiger conflict to help to identify and design effective mitigation measures;                | Times | 1 | 400 | 400 |     |     | 400 |     |     | 400 |
|  | Study ecological processes that affect in maintaining healthy wildlife population;                                                                                              | Times | 1 | 300 | 300 |     |     |     | 300 |     | 300 |
|  | Study the status of human-wildlife conflict mainly with tigers and                                                                                                              | Times | 1 | 350 | 350 | 350 |     |     |     |     | 350 |

|              |                                                                                                                                                     |       |   |     |     |             |             |             |             |             |             |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------|---|-----|-----|-------------|-------------|-------------|-------------|-------------|-------------|
|              | Wild elephant;                                                                                                                                      |       |   |     |     |             |             |             |             |             |             |
|              | Undertake research and development works towards management of wildlife health                                                                      | Times | 1 | 450 | 450 |             |             | 450         |             |             | 450         |
|              | Identify indicator species to assess habitat condition;                                                                                             | Times | 1 | 450 | 450 |             |             |             | 450         |             | 450         |
|              | Status and behavior of sloth bear;                                                                                                                  | Times | 1 | 350 | 350 | 350         |             |             |             |             | 350         |
|              | Status of small carnivores; including wild dog, otter, fishing cat, jungle cat, leopard cat and civets;                                             | Times | 2 | 300 | 600 | 300         |             |             |             |             | 300         |
|              | Carry out study on spatial distribution and abundance of four horned antelope;                                                                      | Times | 1 | 400 | 400 |             |             |             | 460         |             | 460         |
|              | Undertake study of Gaur about distribution, population dynamics, preferred grass and its behavior;                                                  | Times | 1 | 350 | 350 |             | 350         |             |             |             | 350         |
|              | Study Gaur's behavior ecology using cutting-edge technology (satellite/radio-collaring, camera trapping, and genetic analysis. etc.).               | No    | 1 | 400 | 400 |             |             |             |             | 480         | 480         |
|              | Identify critical pangolin habitat and map the priority sites;                                                                                      | Times | 1 | 300 | 300 |             | 300         |             |             |             | 300         |
|              | Study least studied small mammal (mouse, rat, shrew, bat; etc.), herpeto-fauna (python and golden monitor lizard), butterfly, insects and fish; and | Times | 2 | 350 | 700 | 233         |             |             |             | 280         | 513         |
|              | Study pattern and trend of bird migration including migratory birds both general and species-wise                                                   | Times | 1 | 400 | 400 |             | 400         |             |             |             | 400         |
|              | <b>Sub total</b>                                                                                                                                    |       |   |     |     | <b>1583</b> | <b>1650</b> | <b>1565</b> | <b>1630</b> | <b>1960</b> | <b>8388</b> |
| <b>6.1.3</b> | <b>Tourism</b>                                                                                                                                      |       |   |     |     |             |             |             |             |             |             |
|              | Perception of visitors about the tourism facilities and services from hotels and Park authorities                                                   | Times | 1 | 400 | 400 |             |             |             |             | 480         | 480         |

|              |                                                                                                                                       |       |   |     |      |            |            |            |            |            |             |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------|-------|---|-----|------|------------|------------|------------|------------|------------|-------------|
|              | Study to identify potential tourism products and their packaging                                                                      | Times | 1 | 300 | 300  |            |            | 330        |            |            | 330         |
|              | Aspiration of hotel operators regarding services and cooperation from the Park                                                        | Times | 1 | 300 | 300  | 300        |            |            |            |            | 300         |
|              | Conduct study to identify potential site to promote homestay                                                                          | Times | 1 | 400 | 400  |            | 400        |            |            |            | 400         |
|              | Undertake marketing strategy to attract visitors in the Park and BZ                                                                   | Times | 5 | 300 | 1500 | 300        | 315        | 330        | 345        | 360        | 1650        |
|              | <b>Sub Total</b>                                                                                                                      |       |   |     |      | <b>600</b> | <b>715</b> | <b>660</b> | <b>345</b> | <b>840</b> | <b>3160</b> |
| <b>6.1.4</b> | <b>Climate Change</b>                                                                                                                 |       |   |     |      |            |            |            |            |            |             |
|              | Study climate change impact on Gaur and its habitat                                                                                   | Times | 1 | 400 | 400  |            | 420        |            |            | 480        | 900         |
|              | Conduct study of climate change indicators and impact on biodiversity conservation along with identification of adaptation activities | Times | 1 | 300 | 300  | 300        |            |            |            |            | 300         |
|              | Climate change impacts and indicators on biodiversity conservation along with adaptation strategies                                   | Times | 1 | 500 | 500  |            |            |            | 575        |            | 575         |
|              | <b>Sub total</b>                                                                                                                      |       |   |     |      | <b>300</b> | <b>420</b> | <b>0</b>   | <b>575</b> | <b>480</b> | <b>1775</b> |
| <b>6.1.5</b> | <b>BZ</b>                                                                                                                             |       |   |     |      |            |            |            |            |            |             |
|              | Undertake assessment of socio-economic condition of local people in the areas where human-wildlife conflict is high                   | Times | 1 | 300 | 300  |            |            | 300        |            |            | 300         |
|              | Undertake study to mitigate and minimize HWC                                                                                          | Times | 1 | 400 | 400  | 400        |            |            |            |            | 400         |
|              | Impact of BZ programme on conservation and sustainable livelihoods of local communities                                               | Times | 1 | 300 | 300  |            |            |            | 345        |            | 345         |
|              | Conduct study to assess the optimum quantity of sand, gravel and boulder that can be extracted                                        | Times | 1 | 300 | 300  |            |            |            |            | 360        | 360         |

|              |                                                                                                                                                                           |       |   |      |      |             |             |             |             |             |              |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|---|------|------|-------------|-------------|-------------|-------------|-------------|--------------|
|              | each year                                                                                                                                                                 |       |   |      |      |             |             |             |             |             |              |
|              | Study to relocate human settlements of Shikaribas and Bhiman                                                                                                              | Times | 1 | 250  | 250  | 250         |             |             |             |             | 250          |
|              | Undertake study on effectiveness of buffer zone program in the buffer zone – social, environmental and economical                                                         | Times | 1 | 300  | 300  |             | 315         |             |             | 360         | 675          |
|              | <b>Sub total</b>                                                                                                                                                          |       |   |      |      | <b>650</b>  | <b>315</b>  | <b>300</b>  | <b>345</b>  | <b>720</b>  | <b>2330</b>  |
| <b>6.1.6</b> | <b>Institutional Strengthening</b>                                                                                                                                        |       |   |      |      |             |             |             |             |             |              |
|              | Carry out study to include the collaborative forest of southern part of the Park in the Protected Area system                                                             | Times | 1 | 300  | 300  | 300         |             |             |             |             | 300          |
|              | Undertake study to find out ways to place underground optical fibre cable from East-West highway with minimum impacts occurring during the layout and maintenance periods | Times | 1 | 300  | 300  |             | 315         |             |             |             | 315          |
|              | Undertake study to lay out additional pipe line of NOC through PNP                                                                                                        | Times | 1 | 450  | 450  |             |             | 473         |             |             | 473          |
|              | Prepare bibliography of the literatures for which studies were conducted in BNP                                                                                           | Times | 1 | 300  | 300  | 300         |             |             |             |             | 300          |
|              | Undertake Mid-term review of the management plan                                                                                                                          | Times | 1 | 450  | 450  |             |             |             | 518         |             | 518          |
|              | Undertake evaluation of management plan in the fourth year of implementation                                                                                              | Times | 1 | 450  | 450  |             |             |             |             | 540         | 540          |
|              | Conduct management effectiveness of PNP                                                                                                                                   | Times | 1 | 400  | 400  | 400         |             |             |             |             | 400          |
|              | Prepare next five-year management plan (2023-2027) including IEE                                                                                                          | Times | 1 | 2500 | 2500 |             |             |             |             | 3000        | 3000         |
|              | <b>Sub total</b>                                                                                                                                                          |       |   |      |      | <b>1000</b> | <b>315</b>  | <b>473</b>  | <b>518</b>  | <b>3540</b> | <b>5845</b>  |
|              | <b>Sub total (Research)</b>                                                                                                                                               |       |   |      |      | <b>4700</b> | <b>4255</b> | <b>3823</b> | <b>4333</b> | <b>8820</b> | <b>25930</b> |

|              |                                                                                                                                                                                                 |       |   |     |      |             |             |             |             |             |             |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|---|-----|------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>6.2</b>   | <b>Monitoring</b>                                                                                                                                                                               |       |   |     |      |             |             |             |             |             |             |
| <b>6.2.1</b> | <b>Species Monitoring</b>                                                                                                                                                                       |       |   |     |      |             |             |             |             |             |             |
|              | Regular monitoring of Wild elephants in PNP based on direct sightings and indirect signs                                                                                                        | Year  | 5 | 150 | 750  | 150         | 158         | 165         | 173         | 180         | 825         |
|              | Monitor problem Wild elephant using CC camera, satellite radio collars in a real time basis                                                                                                     | Year  | 5 | 150 | 750  | 150         | 158         | 165         | 173         | 180         | 825         |
|              | Monitor tiger on a regular basis based on foot print, scratch and scats                                                                                                                         | Year  | 5 | 150 | 750  | 150         | 158         | 165         | 173         | 180         | 825         |
|              | Undertake problem tiger monitoring using radio collar, camera trap and deploying special team                                                                                                   | Year  | 5 | 150 | 750  | 150         | 158         | 165         | 173         | 180         | 825         |
|              | Monitor problem tiger using satellite radio collars in a real time basis                                                                                                                        | Times | 5 | 150 | 750  | 150         | 158         | 165         | 173         | 180         | 825         |
|              | Monitor prey base species on regular interval                                                                                                                                                   | Times | 5 | 150 | 750  | 150         | 158         | 165         | 173         | 180         | 825         |
|              | Monitoring of four horned antelope on periodic basis based on direct count                                                                                                                      | Times | 5 | 150 | 750  | 150         | 158         | 165         | 173         | 180         | 825         |
|              | Monitoring of small mammals                                                                                                                                                                     | Times | 5 | 150 | 750  | 150         | 158         | 165         | 173         | 180         | 825         |
|              | Monitoring of winter migratory water birds                                                                                                                                                      | Times | 5 | 150 | 750  | 150         | 158         | 165         | 173         | 180         | 825         |
|              | Monitoring of globally threatened and nationally protected birds                                                                                                                                | Times | 5 | 150 | 750  | 150         | 158         | 165         | 173         | 180         | 825         |
|              | <b>Sub total</b>                                                                                                                                                                                |       |   |     |      | <b>1500</b> | <b>1575</b> | <b>1650</b> | <b>1725</b> | <b>1800</b> | <b>8250</b> |
| <b>6.2.2</b> | <b>Habitat Monitoring</b>                                                                                                                                                                       |       |   |     |      |             |             |             |             |             |             |
|              | Undertake habitat monitoring, prepare check list of food plants, document physical and phenological changes in vegetation, quantity and quality of discharges in streams and biotic disturbance | Times | 5 | 250 | 1250 | 250         | 263         | 275         | 288         | 300         | 1375        |

|       |                                                                                                   |       |   |     |      |             |             |             |             |             |              |
|-------|---------------------------------------------------------------------------------------------------|-------|---|-----|------|-------------|-------------|-------------|-------------|-------------|--------------|
|       | Undertake monitoring of permanent plots, transect lines in forests, grasslands and other habitats | Times | 5 | 250 | 1250 | 250         | 263         | 275         | 288         | 300         | 1375         |
|       | Periodic wetlands and water holes monitoring                                                      | Times | 5 | 250 | 1250 | 250         | 263         | 275         | 288         | 300         | 1375         |
|       | Monitor extraction of soil, sand and gravel in coordination with local authority                  | Times | 5 | 250 | 1250 | 250         | 263         | 275         | 288         | 300         | 1375         |
|       | <b>Sub total</b>                                                                                  |       |   |     |      | <b>1000</b> | <b>1050</b> | <b>1100</b> | <b>1150</b> | <b>1200</b> | <b>5500</b>  |
| 6.2.3 | <b>Wildlife health monitoring</b>                                                                 |       |   |     |      |             |             |             |             |             |              |
|       | Undertake regular health check-up of captive elephants including their foot                       | Times | 5 | 250 | 1250 | 250         | 263         | 275         | 288         | 300         | 1375         |
|       | Carry out dung test of captive elephants on a regular basis to assess their health condition      | Times | 5 | 250 | 1250 | 250         | 263         | 275         | 288         | 300         | 1375         |
|       | Monitor key-stone and flagship species on a random basis                                          | Times | 5 | 250 | 1250 | 250         | 263         | 275         | 288         | 300         | 1375         |
|       | <b>Sub total</b>                                                                                  |       |   |     |      | <b>750</b>  | <b>788</b>  | <b>825</b>  | <b>863</b>  | <b>900</b>  | <b>4125</b>  |
| 6.2.4 | <b>Fire monitoring</b>                                                                            |       |   |     |      |             |             |             |             |             |              |
|       | Monitor spatial and temporal pattern of fire incidence                                            | Times | 5 | 250 | 1250 | 250         | 263         | 275         | 288         | 300         | 1375         |
|       | Monitor fire and fuel dynamics                                                                    | Times | 5 | 250 | 1250 | 250         | 263         | 275         | 288         | 300         | 1375         |
|       | <b>Sub total</b>                                                                                  |       |   |     |      | <b>500</b>  | <b>525</b>  | <b>550</b>  | <b>575</b>  | <b>600</b>  | <b>2750</b>  |
| 6.2.5 | <b>Water Quality Monitoring</b>                                                                   |       |   |     |      |             |             |             |             |             |              |
|       | Monitor of water quality of wetlands, water holes, rivers and streams on a regular basis          | Times | 5 | 250 | 1250 | 250         | 263         | 275         | 288         | 300         | 1375         |
|       | <b>Sub total</b>                                                                                  |       |   |     |      | <b>250</b>  | <b>263</b>  | <b>275</b>  | <b>288</b>  | <b>300</b>  | <b>1375</b>  |
|       | <b>Sub total (Monitoring)</b>                                                                     |       |   |     |      | <b>4000</b> | <b>4200</b> | <b>4400</b> | <b>4600</b> | <b>4800</b> | <b>22000</b> |
| 6.3   | <b>Training</b>                                                                                   |       |   |     |      |             |             |             |             |             |              |
| 6.3.1 | <b>Frontline Staff and Security Units</b>                                                         | Times |   |     |      |             |             |             |             |             |              |
|       | Orientation training to security units                                                            | Times | 3 | 75  | 225  | 75          |             | 83          |             | 90          | 248          |
|       | Orientation training to Game Scouts on legal enforcement                                          | Times | 3 | 150 | 450  | 150         |             | 165         |             | 180         | 495          |

|              |                                                                                                                                     |       |   |     |      |     |     |     |     |     |      |
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|              | Basic training on field equipment like GPS, Range Finder, Compass, etc                                                              | Times | 3 | 200 | 600  | 200 | 210 | 220 |     |     | 630  |
|              | Train staff to collect blood, faecal, urine samples including preservation of vital organs and specimens                            | Times | 5 | 75  | 375  | 75  | 79  | 83  | 86  | 90  | 413  |
|              | Field observation techniques, including signs and tracts of wildlife                                                                | Times | 5 | 200 | 1000 | 200 | 210 | 220 | 230 | 240 | 1100 |
|              | Orientation training on social mobilization                                                                                         | Times | 1 | 300 | 300  | 300 |     |     |     |     | 300  |
|              | Basic training on vegetation quantification for recording data in monitoring plots                                                  | Times | 2 | 250 | 500  | 167 |     |     |     | 200 | 367  |
|              | Providing training on waste management practices, including waste segregation, recycling procedures, and proper disposal techniques | Times | 2 | 250 | 500  |     | 263 |     | 288 |     | 550  |
|              | Training on Real-time SMART patrolling                                                                                              | Times | 2 | 250 | 500  |     | 263 |     | 288 |     | 550  |
|              | Training on wildlife handling, rescue and monitoring                                                                                | Times | 2 | 200 | 400  |     | 210 | 220 |     |     | 430  |
|              | Training on tiger and Wild elephant tracking                                                                                        | Times | 3 | 125 | 375  | 125 | 131 | 138 |     |     | 394  |
| <b>6.3.2</b> | <b>For Rangers</b>                                                                                                                  |       |   |     |      |     |     |     |     |     | 0    |
|              | Social mobilization and participatory planning                                                                                      | Times | 2 | 500 | 1000 |     | 500 |     | 575 |     | 1075 |
|              | Effective communication                                                                                                             | Times | 2 | 250 | 500  | 167 |     |     |     | 200 | 367  |
|              | Inventory and resource mapping                                                                                                      | Times | 2 | 250 | 500  |     | 250 |     | 288 |     | 538  |
|              | Training on habitat monitoring                                                                                                      | Times | 2 | 250 | 500  |     |     | 275 |     | 300 | 575  |
|              | Case investigation (crime scene investigation and interrogation)                                                                    | Times | 2 | 250 | 500  |     | 250 |     | 288 |     | 538  |
|              | Training on anti-poaching operation                                                                                                 | Times | 3 | 250 | 750  |     |     |     | 288 |     | 288  |
|              | Training on wildlife handling,                                                                                                      | Times | 2 | 200 | 400  |     | 210 | 220 |     |     | 430  |

|       |                                                                                                                               |       |   |     |      |     |     |     |     |     |      |
|-------|-------------------------------------------------------------------------------------------------------------------------------|-------|---|-----|------|-----|-----|-----|-----|-----|------|
|       | rescue and monitoring                                                                                                         |       |   |     |      |     |     |     |     |     |      |
|       | Training on tiger and Wild elephant tracking                                                                                  | Times | 3 | 125 | 375  | 125 |     | 138 |     | 150 | 413  |
|       | Training on animal capture, rescue and release                                                                                | Times | 2 | 150 | 300  |     | 158 |     | 165 |     | 323  |
|       | Training on wildlife health condition assessment                                                                              | Times | 2 | 300 | 600  |     | 315 |     |     | 360 | 675  |
|       | General and specialized Training of Trainers (ToTs)                                                                           | Times | 3 | 200 | 600  | 200 | 210 | 220 |     |     | 630  |
|       | Database management                                                                                                           | Times | 1 | 300 | 300  |     | 315 |     |     |     | 315  |
| 6.3.3 | For ACO and CCO                                                                                                               |       |   |     |      |     |     |     |     |     |      |
|       | Human-wildlife amity                                                                                                          | Times | 3 | 200 | 600  | 200 | 210 | 220 |     |     | 630  |
|       | Appreciative enquiry                                                                                                          | Times | 3 | 150 | 450  | 150 | 158 | 150 |     |     | 458  |
|       | Human rights training to handle convicted people                                                                              | Times | 5 | 250 | 1250 | 250 | 263 | 250 | 288 | 300 | 1350 |
|       | GIS application for natural resource management focusing on wildlife                                                          | Times | 3 | 300 | 900  | 300 | 315 |     | 345 |     | 960  |
|       | Training of Trainers (general and specialized)                                                                                | Times | 2 | 300 | 600  |     | 315 |     | 345 |     | 660  |
|       | Public administration and management training                                                                                 | Times | 2 | 300 | 600  | 300 |     |     | 345 |     | 645  |
|       | Organization development and management                                                                                       | Times | 2 | 300 | 600  | 300 | 315 |     |     |     | 615  |
|       | Jududical training                                                                                                            | Times | 2 | 300 | 600  |     | 315 |     | 345 |     | 660  |
|       | Planning, monitoring and evaluation training                                                                                  | Times | 5 | 200 | 1000 | 200 | 210 | 200 | 230 | 240 | 1080 |
|       | CITES implementation training                                                                                                 | Times | 2 | 50  | 100  | 50  |     | 55  |     |     | 105  |
| 6.3.4 | For Park and BZ                                                                                                               |       |   |     |      |     |     |     |     |     | 0    |
|       | Forest Fire Management Training to park staff and security personnel and BZCF members                                         | Times | 3 | 200 | 600  | 200 | 210 |     | 230 |     | 640  |
|       | Training for CBAPUs mobilization                                                                                              | Times | 3 | 200 | 600  | 200 | 210 | 220 |     |     | 630  |
|       | Provide trainings to nature guides to enhance their capacity in nature interpretation specifically on wildlife, birds, plants | Times | 3 | 250 | 750  | 250 |     |     | 288 | 300 | 838  |

|            |                                                                                                                                                      |       |    |      |      |              |              |              |              |              |              |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----|------|------|--------------|--------------|--------------|--------------|--------------|--------------|
|            | Training on nature interpretation and display management                                                                                             | Times | 2  | 200  | 400  | 200          |              |              | 230          |              | 430          |
|            | Conduct refresher trainings to nature guides to update their knowledge and skills in nature interpretation                                           | Times | 3  | 300  | 900  | 300          |              | 330          |              |              | 630          |
|            | Build capacity of poor and disadvantaged local people in the areas of hospitality, housekeeping, cooking and hygiene to initiate tourism enterprises | Times | 2  | 300  | 600  | 300          | 315          |              | 345          |              | 960          |
|            | <b>Sub total (Training)</b>                                                                                                                          |       |    |      |      | <b>4983</b>  | <b>6408</b>  | <b>3405</b>  | <b>5484</b>  | <b>2650</b>  | <b>22930</b> |
|            | <b>Total (Research, monitoring and training)</b>                                                                                                     |       |    |      |      | <b>13683</b> | <b>14863</b> | <b>11628</b> | <b>14416</b> | <b>16270</b> | <b>70860</b> |
| <b>7</b>   | <b>Species Conservation</b>                                                                                                                          |       |    |      |      |              |              |              |              |              |              |
| <b>7.1</b> | <b>Wild elephants</b>                                                                                                                                |       |    |      |      |              |              |              |              |              |              |
| 7.1.1      | Undertake plantation in corridors to maintain connectivity for Wild elephant movement                                                                | Times | 5  | 250  | 1250 | 250          | 263          | 275          | 288          | 300          | 1375         |
| 7.1.2      | Construct small cascades in 4 streams to collect water for longer periods                                                                            | No.   | 4  | 800  | 3200 | 640          | 672          | 704          | 736          | 768          | 3520         |
| 7.1.3      | Construct 2 Wild elephant bath-tubs at strategic locations                                                                                           | No.   | 2  | 1200 | 2400 | 1200         |              |              | 1380         |              | 2580         |
| 7.1.4      | Construct 5 RCC watch towers to monitor movement of wild elephant                                                                                    | No.   | 5  | 1000 | 5000 | 1000         | 1050         | 1100         | 1150         | 1200         | 5500         |
| 7.1.5      | Implement satellite based radio telemetry to problematic elephant and monitor to reduce human elephant conflict                                      | No.5  | 5  | 400  | 2000 | 400          | 420          | 440          | 460          | 480          | 2200         |
| 7.1.6      | Support livelihood intervention to the households whose family has been injured or killed by Wild elephant                                           | No.   | 25 | 150  | 3750 | 750          | 788          | 825          | 863          | 900          | 4125         |
| 7.1.7      | Support bee-keeping as elephant deterring activities where wild                                                                                      | Times | 5  | 200  | 1000 | 200          | 210          | 220          | 230          | 240          | 1100         |

|            |                                                                                                                                                                                    |       |   |      |      |             |             |             |              |             |              |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|---|------|------|-------------|-------------|-------------|--------------|-------------|--------------|
|            | elephant often gives trouble                                                                                                                                                       |       |   |      |      |             |             |             |              |             |              |
| 7.1.8      | Prepare a contingency plan with the help of team of expert to manage large herds aided by a team of experts in handling Wild elephants                                             | Times | 1 | 500  | 500  | 500         |             |             |              |             | 500          |
| 7.1.9      | Provide subsidies for alternative agriculture crops which are unpalatable to elephant in the BZ                                                                                    | Year  | 5 | 1000 | 5000 | 1000        | 1050        | 1100        | 1150         | 1200        | 5500         |
| 7.1.10     | Implement conservation awareness activities to reduce human Wild elephant conflict                                                                                                 | Year  | 5 | 500  | 2500 | 500         | 525         | 550         | 575          | 600         | 2750         |
| 7.1.11     | Participate Wild elephant related national and international conferences and workshops and seminar to share knowledge, experiences, and best practices in wild elephant management | Times | 5 | 500  | 2500 | 500         | 525         | 550         | 575          | 600         | 2750         |
| 7.1.12     | Conduct transboundary meeting with VTR to share experiences and address issues and challenges related to Wild elephant                                                             | Times | 5 | 400  | 2000 | 400         | 420         | 440         | 460          | 480         | 2200         |
| 7.1.13     | Conduct Wild elephant census in PNP at every 3 years.                                                                                                                              | Times | 3 | 750  | 2250 |             |             |             | 2588         |             | 2588         |
|            | <b>Sub Total</b>                                                                                                                                                                   |       |   |      |      | <b>7340</b> | <b>5922</b> | <b>6204</b> | <b>10454</b> | <b>6768</b> | <b>36688</b> |
| <b>7.2</b> | <b>Tiger</b>                                                                                                                                                                       |       |   |      |      |             |             |             |              |             |              |
| 7.2.1      | Prepare land use map of PNP and forest corridors focusing on effective management of wetlands and grasslands                                                                       | Times | 2 | 500  | 1000 |             | 525         |             | 575          |             | 1100         |
| 7.2.2      | Undertake an assessment of tiger population viability and carrying capacity in PNP                                                                                                 | Times | 3 | 800  | 2400 | 800         |             | 880         |              | 960         | 2640         |
| 7.2.3      | Monitor problem tiger placing radio collar and share the information                                                                                                               | Times | 5 | 400  | 2000 | 400         | 420         | 440         | 460          | 480         | 2200         |
| 7.2.4      | Support alternative livelihood opportunities for forest dependent                                                                                                                  | Times | 5 | 800  | 4000 | 800         | 840         | 880         | 920          | 960         | 4400         |

|        |                                                                                                                |       |    |      |       |      |      |      |      |      |       |
|--------|----------------------------------------------------------------------------------------------------------------|-------|----|------|-------|------|------|------|------|------|-------|
|        | marginalized households                                                                                        |       |    |      |       |      |      |      |      |      |       |
| 7.2.5  | Undertake tiger count in every five years by camera trapping method following approved protocol;               | Times | 1  | 1500 | 1500  |      |      |      |      | 1500 | 1500  |
| 7.2.6  | Monitor tigers around the human activity areas with local community engagement                                 | Times | 5  | 650  | 3250  | 650  | 683  | 715  | 748  | 780  | 3575  |
| 7.2.7  | Celebrate World Tiger Day on 29th July every year and take opportunity to promote tiger conservation awareness | Years | 5  | 250  | 1250  | 250  | 263  | 275  | 288  | 300  | 1375  |
| 7.2.8  | Erect signs of warning to the passersby in the major rights of ways, resource collection sites and shrines;    | No.   | 50 | 15   | 750   | 150  | 158  | 165  | 173  | 180  | 825   |
| 7.2.9  | Equip anti-poaching units with all necessary field gears and equipment                                         | Times | 5  | 350  | 1750  | 350  | 368  | 385  | 403  | 420  | 1925  |
| 7.2.10 | Undertake trans boundary cooperation meetings with VTR India.                                                  | Times | 5  | 75   | 375   | 75   | 79   | 83   | 86   | 90   | 413   |
|        | Sub Total                                                                                                      |       |    |      |       | 3475 | 3334 | 3823 | 3651 | 5670 | 19953 |
| 7.3    | Gaur                                                                                                           |       |    |      |       |      |      |      |      |      |       |
| 7.3.1  | Conduct Gaur count in 4-5 years                                                                                | Times | 5  | 800  | 4000  | 800  | 840  | 880  | 920  | 960  | 4400  |
| 7.3.2  | Document and analyze the Gaur poaching cases                                                                   | Times | 5  | 250  | 1250  | 250  | 263  | 275  | 288  | 300  | 1375  |
| 7.3.3  | Document ethnic, religious and traditional belief on Gaur                                                      | Times | 1  | 350  | 350   |      |      |      | 403  |      | 403   |
| 7.3.4  | Construct Gaur statue in strategic areas like Amlekhjung, Subarnapur, Pratapur, and Nijgadh                    | No    | 2  | 1500 | 3000  |      | 1500 |      |      | 1725 | 3225  |
| 7.3.5  | Develop Gaur trail (hiking, walking or cycling) in Churia region of PNP                                        | Times | 5  | 2500 | 12500 | 2500 | 2625 | 2750 | 2875 | 3000 | 13750 |
| 7.3.6  | Organize experience sharing meeting among PNP, CNP and VTR and concerned local authorities                     | Times | 5  | 500  | 2500  | 500  | 525  | 550  | 575  | 600  | 2750  |

|            |                                                                                                                                    |       |   |     |      |             |             |             |             |             |              |
|------------|------------------------------------------------------------------------------------------------------------------------------------|-------|---|-----|------|-------------|-------------|-------------|-------------|-------------|--------------|
|            | <b>Sub Total</b>                                                                                                                   |       |   |     |      | <b>4050</b> | <b>5753</b> | <b>4455</b> | <b>5060</b> | <b>6585</b> | <b>25903</b> |
| <b>7.4</b> | <b>Pangolin</b>                                                                                                                    |       |   |     |      |             |             |             |             |             |              |
| 7.4.1      | Organize regular coordination meetings at local and regional level for sharing information on pangolin related activities          | Times | 5 | 300 | 1500 | 300         | 315         | 330         | 345         | 360         | 1650         |
| 7.4.2      | Organize regular trans-boundary conservation cooperation meetings with neighboring countries                                       | Times | 5 | 500 | 2500 | 500         | 525         | 550         | 575         | 600         | 2750         |
| 7.4.3      | Assess local knowledge, traditions, attitude and perceptions on pangolin conservation                                              | Times | 5 | 400 | 2000 | 400         | 420         | 440         | 460         | 480         | 2200         |
| 7.4.4      | Conduct awareness campaigns on Pangolin conservation                                                                               | Times | 5 | 250 | 1250 | 250         | 263         | 275         | 288         | 300         | 1375         |
| 7.4.5      | Formulate and implement mitigation measures for development and other construction works in the prime/designated pangolin habitats | Times | 5 | 350 | 1750 | 350         | 368         | 385         | 403         | 420         | 1925         |
|            | Sub Total                                                                                                                          |       |   |     |      | 1800        | 1890        | 1980        | 2070        | 2160        | 9900         |
| <b>7.5</b> | <b>Key small mammals</b>                                                                                                           |       |   |     |      |             |             |             |             |             |              |
| 7.5.1      | Construct wallowing spots for Rhino at Pratapur and improve water supply in existing water holes                                   | No.   | 5 | 300 | 1500 | 300         | 315         | 330         | 345         | 360         | 1650         |
| 7.5.2      | Provide support to management of problem animal, injured wildlife and orphan wild animal including provision of food and treatment | No.   | 5 | 500 | 2500 | 500         | 525         | 550         | 575         | 600         | 2750         |
| 7.5.3      | Conduct species, population and habitat survey of turtle                                                                           | No.   | 1 | 500 | 500  | 500         |             |             |             |             | 500          |
| 7.5.4      | Undertake activities to conserve Bengal florican in PNP                                                                            | No.   | 1 | 500 | 500  |             | 525         |             |             |             | 525          |
| 7.5.5      | Update the status of habitat composition of Flora of PNP                                                                           | No.   | 1 | 500 | 500  |             |             | 550         |             |             | 550          |
| 7.5.6      | Update the birds of PNP                                                                                                            | No.   | 1 | 500 | 500  |             |             |             | 575         |             | 575          |
| 7.5.7      | Update the list of herpetofauna of                                                                                                 | No.   | 1 | 500 | 500  |             |             |             |             | 600         | 600          |

|          |                                                                                                                                                                                                        |       |    |      |       |              |              |              |              |              |               |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----|------|-------|--------------|--------------|--------------|--------------|--------------|---------------|
|          | PNP                                                                                                                                                                                                    |       |    |      |       |              |              |              |              |              |               |
| 7.5.8    | Update the list of butterflies of PNP                                                                                                                                                                  | No.   | 1  | 500  | 500   |              | 525          |              |              |              | 525           |
| 7.5.9    | Update the list of fishes in PNP                                                                                                                                                                       | No.   | 1  | 500  | 500   |              |              | 550          |              |              | 550           |
| 7.5.10   | Pilot 2 canopy bridge along Pathlaiya-Amlekhgunj road of east-west highway to reduce roadkills of monkey                                                                                               | No.   | 2  | 1000 | 2000  | 1000         | 1050         |              |              |              | 2050          |
| 7.5.11   | Carry out satellite tagging of rare, endangered and protected bird species                                                                                                                             | No.   | 5  | 2500 | 12500 | 2500         | 2625         | 2750         | 2875         | 3000         | 13750         |
| 7.5.12   | Erect hoarding boards in the highways to reduce animal hit and aware the general public about the risk factors on small mammals                                                                        | No.   | 15 | 25   | 375   | 75           | 79           | 83           | 86           | 90           | 413           |
| 7.5.13   | Procure tools and equipment required to run Rapid Response Team                                                                                                                                        | No.   | 5  | 300  | 1500  | 300          | 315          | 330          | 345          | 360          | 1650          |
|          | <b>Sub Total</b>                                                                                                                                                                                       |       |    |      |       | <b>5175</b>  | <b>5959</b>  | <b>5143</b>  | <b>4801</b>  | <b>5010</b>  | <b>26088</b>  |
|          | <b>Total</b>                                                                                                                                                                                           |       |    |      |       | <b>21840</b> | <b>22857</b> | <b>21604</b> | <b>26036</b> | <b>26193</b> | <b>118530</b> |
| <b>8</b> | <b>Tourism</b>                                                                                                                                                                                         |       |    |      |       |              |              |              |              |              |               |
| 8.1      | Undertake GPS mapping of tourism products in PNP                                                                                                                                                       | Times | 2  | 400  | 800   | 800          |              |              |              | 960          | 1760          |
| 8.2      | Construct 1 multipurpose Visitor Information Centre (VIC) at Aadhavar that includes ticket counter, display centre, museum, documentary showing hall, souvenir shop, refreshment centre, and rest room | No.   | 1  | 7500 | 7500  | 7500         |              |              |              |              | 7500          |
| 8.3      | Construct 2 VIC in ECF of Amlekhgunj and Pratapur                                                                                                                                                      | No.   | 2  | 3500 | 7000  | 3500         | 3500         |              |              |              | 7000          |
| 8.4      | Construct 2 community culture centre at Amlekhgunj and Pratapur.                                                                                                                                       | No.   | 2  | 2500 | 5000  |              | 2500         |              | 2750         |              | 5250          |
| 8.5      | Support to develop 3 community cultural museum at Subarnapur Homestay, Amlekhgunj, and                                                                                                                 | No.   | 3  | 2000 | 6000  | 2000         |              | 2100         |              | 2400         | 6500          |

|      |                                                                                                                                                                                                                |       |    |       |       |      |      |      |      |      |      |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----|-------|-------|------|------|------|------|------|------|
|      | Pratapur;                                                                                                                                                                                                      |       |    |       |       |      |      |      |      |      |      |
| 8.6  | Construct 6 entry gates in (at Sahajnath, Ratanpuri, Lamitar, Pratapur, Gaduwaline and Charbhaiya);                                                                                                            | No.   | 6  | 1000  | 6000  | 2000 | 2100 | 2200 |      |      | 6300 |
| 8.7  | Construct 2 welcome gate in Amlekhgunj and Pathlaiya;                                                                                                                                                          | No.   | 2  | 1000  | 2000  |      |      |      |      | 2000 | 2000 |
| 8.8  | Construction of raised platforms or embark points for elephant safari, at least, in 2 places;                                                                                                                  | No.   | 2  | 700   | 1400  | 700  | 735  |      |      |      | 1435 |
| 8.9  | Construct 1 suspension bridge at Pratapur with the support of SBD;                                                                                                                                             | No.   | 1  | 30000 | 30000 |      |      |      |      |      | 0    |
| 8.10 | Pilot 1 canopy walk in Amlekhgunj (Churia-Kamini daha) with the support of SBD;                                                                                                                                | No.   | 1  | 40000 | 40000 |      |      |      |      |      | 0    |
| 8.11 | Upgrade bhata-Pratapur 28 km fire line for tourism purpose;                                                                                                                                                    | Km    | 28 | 200   | 5600  | 1120 | 1176 | 1232 | 1288 | 1344 | 6160 |
| 8.12 | Renovate, maintain and repair 3 elephant embark points;                                                                                                                                                        | No.   | 3  | 400   | 1200  | 300  | 315  | 330  |      |      | 945  |
| 8.13 | Place information or hoarding boards showing important tourist destinations and tourism products at key locations such as Amlekhgunj, Pathlaiya, Nijgadh, Simra Airport, Hetauda, Birgunj and Bharatpur;       | No.   | 15 | 350   | 5250  | 5250 |      |      |      |      | 5250 |
| 8.14 | Place signage at strategic places of the Park to show direction to the visitors                                                                                                                                | No.   | 25 | 25    | 625   | 125  | 131  | 138  | 144  | 150  | 688  |
| 8.15 | Organize PNP cycling tour event;                                                                                                                                                                               | Times | 5  | 750   | 3750  | 938  | 984  | 1031 | 1078 | 1125 | 5156 |
| 8.16 | Conduct nature guide trainings including refresher training and certification to local and interested individuals giving priority to marginalized, vulnerable and socially excluded sections of the community; | Times | 2  | 500   | 1000  |      | 525  |      |      | 600  | 1125 |

|      |                                                                                                                                                                                |       |    |     |      |     |     |     |     |     |      |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----|-----|------|-----|-----|-----|-----|-----|------|
| 8.17 | Conduct trainings for local homestay operators about business planning, hospitality, security of visitors belongings, cook and house-keeping trainings;                        | Times | 2  | 500 | 1000 |     |     | 550 | 633 |     | 1183 |
| 8.18 | Organize cottage and small business development and management training                                                                                                        | Times | 2  | 500 | 1000 | 500 |     |     |     | 600 | 1100 |
| 8.19 | Install dustbin in the BZ in proper numbers as per tourist pressure;                                                                                                           | No.   | 50 | 50  | 2500 | 500 | 525 | 550 | 575 | 600 | 2750 |
| 8.20 | Organize Clean-up campaign to manage waste in the highway (waste collection and disposal);                                                                                     | Times | 15 | 50  | 750  | 150 | 158 | 165 | 173 | 180 | 825  |
| 8.21 | Organize local food festival in PNP                                                                                                                                            | Times | 3  | 600 | 1800 | 600 |     | 660 |     | 720 | 1980 |
| 8.22 | Prepare operational and management guidelines for the stay in PNP                                                                                                              | Times | 1  | 400 | 400  | 400 |     |     |     |     | 400  |
| 8.23 | Organize meeting with travel operators for the schemes of Travel Give Way and initiate direct luxury bus service to Aadhavar or Amlekhgunj from Kathmandu, Pokhara and Chitwan | Times | 5  | 150 | 750  | 150 | 158 | 165 | 173 | 180 | 825  |
| 8.24 | Organize special events, nature festivals, workshops, and guided hikes within the national park on the occasion of World Tourism Day on September 27                           | Times | 5  | 350 | 1750 | 350 | 368 | 385 | 403 | 420 | 1925 |
| 8.25 | Organize PNP day on Baisakh 5 through various activities                                                                                                                       | Times | 5  | 450 | 2250 | 450 | 473 | 495 | 518 | 540 | 2475 |
| 8.26 | Organize learning visits for local tourism entrepreneurs to other PAs mainly ACAP, CNP and Sagarmatha National Park (SNP)                                                      | Times | 5  | 550 | 2750 | 550 | 578 | 605 | 633 | 660 | 3025 |
| 8.27 | Provide support to journalists to visit PNP and publish article                                                                                                                | Times | 5  | 500 | 2500 | 500 | 525 | 550 | 575 | 600 | 2750 |

|          |                                                                                                                            |       |    |     |      |              |              |              |              |              |              |
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| 8.28     | Publish conservation messages and articles in newspaper                                                                    | Times | 5  | 350 | 1750 | 350          | 368          | 385          | 403          | 420          | 1925         |
| 8.29     | Provide support to produce video spot for tourism advertisement                                                            | Times | 2  | 300 | 600  | 120          |              |              |              | 144          | 264          |
| 8.30     | Production of a video documentary to attract tourists in PNP                                                               | Times | 2  | 500 | 1000 |              | 200          |              | 240          |              | 440          |
| 8.31     | Provide support to produce radio products for advertisement to air through Radio FM                                        | Times | 5  | 300 | 1500 | 300          | 315          | 330          | 345          | 360          | 1650         |
| 8.32     | Advertise tourism attractions in PNP through Video Spot, Television, Radio and FM radio at national and local level        | No.   | 5  | 250 | 1250 | 250          | 263          | 275          | 288          | 300          | 1375         |
|          | <b>Sub Total</b>                                                                                                           |       |    |     |      | <b>29403</b> | <b>15894</b> | <b>12146</b> | <b>10215</b> | <b>14303</b> | <b>81960</b> |
| <b>9</b> | <b>Other Program</b>                                                                                                       |       |    |     |      |              |              |              |              |              |              |
| 9.1      | Climate change adaptation                                                                                                  |       |    |     |      |              |              |              |              |              |              |
| 9.1.1    | Prepare integrated water resource management plan that account for changing precipitation patterns and water availability; | Times | 1  | 500 | 500  |              | 525          |              |              |              | 525          |
| 9.1.2    | Undertake activities for water source protection;                                                                          | No.   | 15 | 300 | 4500 | 900          | 945          | 990          | 1035         | 1080         | 4950         |
| 9.1.3    | Undertake vulnerability assessment with respect to climate change;                                                         | Times | 1  | 300 | 300  |              | 315          |              |              |              | 315          |
| 9.1.4    | Detail mapping of flood vulnerable communities and infrastructures in PNP and BZ;                                          | Times | 1  | 400 | 400  |              | 420          |              |              |              | 420          |
| 9.1.5    | Prepare local Disaster and Climate Resilience Plan for all the municipalities and rural municipalities in BZ;              | No.   | 10 | 300 | 3000 | 600          | 630          | 660          | 690          | 720          | 3300         |
| 9.1.6    | Support the implementation of disaster risk reduction and adaptation priorities of BZCF;                                   | Times | 5  | 250 | 1250 | 250          | 263          | 275          | 288          | 300          | 1375         |
| 9.1.7    | Form Flood Risk Management Committee and support to                                                                        | No.   | 1  | 100 | 100  | 100          |              |              |              |              | 100          |

|            |                                                                                                                                                     |       |    |     |      |             |             |             |             |             |              |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------|----|-----|------|-------------|-------------|-------------|-------------|-------------|--------------|
|            | institutionalize it;                                                                                                                                |       |    |     |      |             |             |             |             |             |              |
| 9.1.8      | Undertake plantation in BZ to maintain balance between fuel wood demand and supply for the household of local people;                               | Ha    | 25 | 50  | 1250 | 250         | 263         | 275         | 288         | 300         | 1375         |
| 9.1.9      | Carry out planation of soil binder species along the river banks to control landslide;                                                              | Ha    | 50 | 50  | 2500 | 500         | 525         | 550         | 575         | 600         | 2750         |
| 9.1.10     | Plantation of trees outside of the forests in public and private land;                                                                              | Times | 5  | 50  | 250  | 50          | 53          | 55          | 58          | 60          | 275          |
| 9.1.11     | Introduce appropriate biomass energy technologies to reduce fuel wood consumption;                                                                  | Times | 5  | 400 | 2000 | 400         | 420         | 440         | 460         | 480         | 2200         |
| 9.1.12     | Undertake soil and moisture conservation works in Chure to control sediment flow and landslide in downstream;                                       | Times | 5  | 500 | 2500 | 500         | 525         | 550         | 575         | 600         | 2750         |
| 9.1.13     | Construct any soil conservation measures in various streams/ivers to protect wildlife from floods;                                                  | No.   | 5  | 350 | 1750 | 350         | 368         | 404         | 465         | 558         | 2145         |
| 9.1.14     | Support BZCFs to link with market towards carbon financing                                                                                          | Times | 5  | 250 | 1250 | 250         | 263         | 289         | 332         | 398         | 1532         |
|            | <b>Total</b>                                                                                                                                        |       |    |     |      | <b>4150</b> | <b>5513</b> | <b>4488</b> | <b>4764</b> | <b>5096</b> | <b>24011</b> |
| <b>9.2</b> | <b>Solid waste management</b>                                                                                                                       |       |    |     |      |             |             |             |             |             |              |
| 9.2.1      | Provide support to demonstrate proper techniques of garbage disposal and recycling techniques;                                                      | Times | 2  | 250 | 500  | 250         | 263         |             |             |             | 513          |
| 9.2.2      | Provide support to manage garbage with special focus on reducing production, recycling, by prohibiting use of polluting items such as plastic bags; | Times | 2  | 400 | 800  | 400         | 420         |             |             |             | 820          |
| 9.2.3      | Installing clearly labeled waste bins for different types of waste, such as recyclables, organic waste, and non-recyclable waste near entry         | No.   | 25 | 50  | 1250 | 250         | 263         | 289         | 332         | 398         | 1532         |

|           |                                                                                                                           |       |     |      |       |             |             |             |             |             |             |
|-----------|---------------------------------------------------------------------------------------------------------------------------|-------|-----|------|-------|-------------|-------------|-------------|-------------|-------------|-------------|
|           | point, ticket counter and ECF;                                                                                            |       |     |      |       |             |             |             |             |             |             |
| 9.2.4     | Organize clean up campaigns together with security units and BZUC to collect plastics, glass, paper, and metal;           | Times | 5   | 500  | 2500  | 500         | 525         | 578         | 664         | 797         | 3064        |
| 9.2.5     | Prepare a common sanitation guideline to make hotel, lodge, homestay and restaurant to make them adopt minimum standards; | Times | 1   | 300  | 300   | 300         |             |             |             |             | 300         |
| 9.2.6     | Provide water potable drinking water supply to the visitors in all the entry gates; and                                   | Times | 5   | 350  | 1750  | 350         | 368         | 404         | 465         | 558         | 2145        |
| 9.2.7     | Support eco-clubs to organize clean-up campaign regularly.                                                                | Years | 5   | 250  | 1250  | 250         | 263         | 289         | 332         | 398         | 1532        |
|           | <b>Total</b>                                                                                                              |       |     |      |       | <b>2300</b> | <b>2100</b> | <b>1559</b> | <b>1793</b> | <b>2152</b> | <b>9904</b> |
| <b>10</b> | <b>Buffer Zone</b>                                                                                                        |       |     |      |       |             |             |             |             |             |             |
| 10.1      | Support 46 BZCFs to renew their OPs                                                                                       | No.   | 50  | 50   | 2500  | 500         | 525         | 550         | 575         | 600         | 2750        |
| 10.2      | Handover additional 5 BZCFs to fulfill the demand of fuel, fodder and timber                                              | No.   | 15  | 50   | 750   | 150         | 158         | 165         | 173         | 180         | 825         |
| 10.3      | Organize BZCF management trainings                                                                                        | No.   | 5   | 100  | 500   | 100         | 105         | 110         | 115         | 120         | 550         |
| 10.4      | Restore degraded forests in the BZ/national forests and CFs in BZ by artificial or natural regeneration                   | Ha.   | 100 | 40   | 4000  | 800         | 840         | 880         | 920         | 960         | 4400        |
| 10.5      | Support local community to operate 3 private nurseries                                                                    | No.   | 1   | 350  | 350   | 350         |             |             |             |             | 350         |
| 10.6      | Provide seedlings and organize plantation in the corridor, roadside, river banks, public and private land                 | Ha.   | 200 | 50   | 10000 | 2000        | 2100        | 2200        | 2300        | 2400        | 11000       |
| 10.7      | Support fruit tree plantation and alternative cropping to reduce the wildlife attractions in the agricultural field       | Ha.   | 100 | 50   | 5000  | 1000        | 1050        | 1100        | 1150        | 1200        | 5500        |
| 10.8      | Implement Churia conservation                                                                                             | Times | 5   | 2500 | 12500 | 2500        | 2625        | 2750        | 2875        | 3000        | 13750       |

|       |                                                                                                               |       |     |      |      |      |      |      |      |      |        |
|-------|---------------------------------------------------------------------------------------------------------------|-------|-----|------|------|------|------|------|------|------|--------|
|       | program in BZ to mitigate impacts of flash floods and landslides                                              |       |     |      |      |      |      |      |      |      |        |
| 10.9  | Provide support to install Improved Cook Stove (ICS) to 100 HHs of marginalized communities                   | No.   | 100 | 2    | 150  | 30   | 32   | 33   | 35   | 36   | 165    |
| 10.10 | Undertake river training work in the BZ by embankment protection                                              | Years | 5   | 500  | 2500 | 500  | 525  | 550  | 575  | 600  | 2750   |
| 10.11 | Provide support to repair and maintenance of forest road in BZ                                                | No.   | 250 | 5    | 1250 | 250  | 263  | 275  | 288  | 300  | 1375   |
| 10.12 | Construction of culvert and cause way in the BZ                                                               | No.   | 15  | 500  | 7500 | 1500 | 1575 | 1650 | 1725 | 1800 | 8250   |
| 10.13 | Construction 5 sub surface water (sub well) harvesting dam in BZ                                              | No.   | 5   | 1500 | 7500 | 1500 | 1575 | 1650 | 1725 | 1800 | 8250   |
| 10.14 | Pilot rain water harvesting program in selected Churia region to address water stress and extended dry spells | No.   | 15  | 500  | 7500 | 1500 | 1575 | 1650 | 1725 | 1800 | 8250   |
| 10.15 | Prepare livelihood improvement strategy and plan for the BZ                                                   | No.   | 1   | 500  | 500  | 500  |      |      |      |      | 500    |
| 10.16 | Conduct high value agriculture crops (not preferred by wildlife) farming training                             | Times | 3   | 125  | 375  | 125  | 131  | 138  |      |      | 393.75 |
| 10.17 | Provide support to procure 15 improved animal breed to reduce number of unproductive domestic animals         | No.   | 10  | 35   | 350  | 70   | 74   | 77   | 81   | 84   | 385    |
| 10.18 | Support farmers in adopting climate-smart agricultural practices that improve productivity, conserve water    | Times | 5   | 500  | 2500 | 500  | 525  | 550  | 575  | 600  | 2750   |
| 10.19 | Support to rescue and manage wildlife in BZ                                                                   | Times | 5   | 500  | 2500 | 500  | 525  | 550  | 575  | 600  | 2750   |
| 10.20 | Provide leadership training to Chairs and Vice Chairs of BZUG and BZUC                                        | No.   | 20  | 75   | 1500 | 300  | 315  | 330  | 345  | 360  | 1650   |
| 10.21 | Provide account keeping training to Secretary or Treasurer                                                    | No.   | 20  | 75   | 1500 | 300  | 315  | 330  | 345  | 360  | 1650   |

|       |                                                                                                                                                             |       |   |      |      |      |       |      |       |      |       |
|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|---|------|------|------|-------|------|-------|------|-------|
| 10.22 | Provide support to organize cooperative management training                                                                                                 | Times | 5 | 150  | 750  | 150  | 157.5 | 165  | 172.5 | 180  | 825   |
| 10.23 | Carry out financial management training                                                                                                                     | No.   | 5 | 200  | 1000 | 200  | 210   | 220  | 230   | 240  | 1100  |
| 10.24 | Participatory planning and monitoring training                                                                                                              | No.   | 5 | 150  | 750  | 150  | 157.5 | 165  | 172.5 | 180  | 825   |
| 10.25 | Regulation of relief fund for victims of human wildlife conflict                                                                                            | Year  | 5 | 1000 | 5000 | 1000 | 1050  | 1100 | 1150  | 1200 | 5500  |
| 10.26 | Award distribution to best UG/UC                                                                                                                            | Year  | 5 | 75   | 375  | 75   | 78.75 | 82.5 | 86.25 | 90   | 412.5 |
| 10.27 | Support CBAPU for mobilization                                                                                                                              | Year  | 5 | 250  | 1250 | 250  | 263   | 275  | 288   | 300  | 1375  |
| 10.28 | Learning Visit of PNP staffs and BZUC members                                                                                                               | Times | 5 | 750  | 3750 | 750  | 787.5 | 825  | 862.5 | 900  | 4125  |
| 10.29 | Educational tour of Eco-club members to learn importance of biodiversity conservation                                                                       | Times | 3 | 500  | 1500 | 500  |       | 550  |       | 600  | 1650  |
| 10.30 | Form, strengthen and mobilize Eco-clubs in clean-up campaigns, awareness and capacity building events and plantation initiatives                            | Times | 5 | 500  | 2500 | 500  | 525   | 550  | 575   | 600  | 2750  |
| 10.31 | Support 'Eco-clubs' to implement school level conservation awareness activities                                                                             | Year  | 5 | 400  | 2000 | 400  | 420   | 440  | 460   | 480  | 2200  |
| 10.32 | Conduct conservation awareness campaign at school and villages of BZ with conservation focused cultural show, street drama, concert, documentary show, etc. | Year  | 5 | 150  | 750  | 150  | 158   | 165  | 173   | 180  | 825   |
| 10.33 | Implement ToT for the teachers of schools of BZ on biodiversity conservation                                                                                | Year  | 5 | 500  | 2500 | 500  | 525   | 550  | 575   | 600  | 2750  |
| 10.34 | Produce Information Education and Communication (IEC) material                                                                                              | Times | 1 | 300  | 300  |      |       | 300  |       |      | 300   |
| 10.35 | Orientation training regarding conservation legislation to BZ communities                                                                                   | Times | 5 | 25   | 125  | 25   | 26    | 27.5 |       |      | 78.75 |
| 10.36 | Celebrate various conservation days                                                                                                                         | years | 5 | 500  | 2500 | 500  | 525   | 550  | 575   | 600  | 2750  |

|           |                                                   |       |    |         |        |               |               |               |               |               |                |
|-----------|---------------------------------------------------|-------|----|---------|--------|---------------|---------------|---------------|---------------|---------------|----------------|
| 10.37     | Produce monthly radio documentary of BZ programme | No.   | 60 | 15      | 900    | 180           | 189           | 198           | 207           | 216           | 990            |
| 10.38     | Produce video documentary focusing BZ programme   | No.   | 1  | 500     | 500    | 500           |               |               |               |               | 500            |
| 10.39     | Organize BZMC meetings                            | Times | 15 | 150     | 2250   | 450           | 472.5         | 495           | 517.5         | 540           | 2475           |
| 10.40     | Support BZUC to prepare five year plan            | Times | 19 | 50      | 950    | 190           | 200           | 209           | 219           | 1140          | 1957           |
| 10.41     | BZUC implementation                               | Years | 5  | 9750    | 48750  | 9750          | 10237.5       | 10725         | 11212.5       | 11700         | 53625          |
|           | <b>Total</b>                                      |       |    |         |        | <b>31195</b>  | <b>30812</b>  | <b>33130</b>  | <b>33574</b>  | <b>36546</b>  | <b>165257</b>  |
| <b>13</b> | <b>Administrative Expenses</b>                    |       |    |         |        |               |               |               |               |               |                |
| 13.1      | Administrative (Salary, DSA, Ration)              | Years | 5  | 20745.6 | 103728 | 20746         | 21782.9       | 22820.2       | 23857.44      | 24894.7       | 114101         |
| 13.2      | Maintenance of vehicle, motorbikes, cycles        | Years | 5  | 915     | 4575   | 915           | 960.75        | 960.75        | 1006.5        | 1006.5        | 4850           |
| 13.3      | Fuel for vehicle and motorbikes                   | Years | 5  | 1075    | 5375   | 1075          | 1128.75       | 1128.75       | 1182.5        | 1182.5        | 5698           |
| 13.4      | Management of office equipment                    | Years | 5  | 964     | 4820   | 964           | 1012.2        | 1012.2        | 1060.4        | 1060.4        | 5109           |
| 13.5      | Travel                                            | Years | 5  | 370     | 1850   | 370           | 388.5         | 388.5         | 407           | 407           | 1961           |
| 13.6      | Water and electricity                             | Years | 5  | 904     | 4520   | 904           | 949.2         | 949.2         | 994.4         | 994.4         | 4791           |
| 13.7      | Communication                                     | Years | 5  | 494     | 2470   | 494           | 518.7         | 518.7         | 543.4         | 543.4         | 2618           |
| 13.8      | Miscellaneous                                     | Years | 5  | 230     | 1150   | 230           | 241.5         | 241.5         | 253           | 253           | 1219           |
|           | <b>Total</b>                                      |       |    |         |        | <b>25698</b>  | <b>26982</b>  | <b>28020</b>  | <b>29305</b>  | <b>30342</b>  | <b>140346</b>  |
|           | <b>Grand Total</b>                                |       |    |         |        | <b>230560</b> | <b>233740</b> | <b>234552</b> | <b>247026</b> | <b>247850</b> | <b>1193728</b> |

## Annex VIII-A: Activities and budget of 13 BZUCs

पर्सो राष्ट्रिय निकुञ्ज मध्यवर्ती क्षेत्र,  
जनहित उपभोक्ता समिति  
रकम रु .००० (हजार)

| सि.नं. | कार्यक्रम                   | इकाई  | परिमाण | रकम  | जम्मा<br>रकम | १    | २    | ३    | ४    | ५    |                  |
|--------|-----------------------------|-------|--------|------|--------------|------|------|------|------|------|------------------|
| १      | संरक्षण                     |       |        |      |              |      |      |      |      |      |                  |
| १.१    | सा.व. नविकरण                | वटा   | ४      | ४०   | १६०          | ३२   | ३२   | ३२   | ३२   | ३२   |                  |
| १.२    | वन हेरालु                   | वर्ष  | २०     | १८०  | ३६००         | ७२०  | ७२०  | ७२०  | ७२०  | ७२०  |                  |
| १.३    | मेसजाली घेरवार              | कि.मी | ९      | ३००  | २७००         | ५४०  | ५४०  | ५४०  | ५४०  | ५४०  | स्थानीय<br>सरकार |
| १.४    | स्पाई क्यामेरा जडान         | वटा   | ४      | ५०   | २००          | ४०   | ४०   | ४०   | ४०   | ४०   |                  |
| १.५    | पानी पोखरी निर्माण          | वटा   | ४      | २५०० | १००००        | २००० | २००० | २००० | २००० | २००० | स्थानीय<br>सरकार |
| १.६    | सौर्य बोरीड                 | वटा   | ४      | २५०० | १००००        | २००० | २००० | २००० | २००० | २००० | स्थानीय<br>सरकार |
| १.७    | मचान                        | वटा   | ८      | १००० | ८०००         | १६०० | १६०० | १६०० | १६०० | १६०० |                  |
| १.८    | घाँसे मैदान निर्माण         | हे    | १२     | ५०   | ६००          | १२०  | १२०  | १२०  | १२०  | १२०  |                  |
| १.९    | वनपथ/अग्नी रेखा निर्माण     | कि.मी | ३०     | २००  | ६०००         | १२०० | १२०० | १२०० | १२०० | १२०० |                  |
| १.११   | आगलागी नियन्त्रण            | वटा   | ४      | ५००  | २०००         | ४००  | ४००  | ४००  | ४००  | ४००  |                  |
| १.११   | भेडाहा खोलामा तटबन्धन       | कि.मी | ५      | २५०० | १२५००        | २५०० | २५०० | २५०० | २५०० | २५०० |                  |
| १.१२   | भेडाहा खोलामा च्यानल खोल्ने | कि.मी | ५      | ५००  | २५००         | ५००  | ५००  | ५००  | ५००  | ५००  |                  |

|      |                                                 |       |     |      |      |     |      |      |      |      |  |
|------|-------------------------------------------------|-------|-----|------|------|-----|------|------|------|------|--|
| १.१३ | सा.व. व्यवस्थापन तालिम                          | पटक   | ५   | ५०   | २५०  | ५०  | ५०   | ५०   | ५०   | ५०   |  |
| १.१४ | वृक्षारोपण                                      | हे    | ४   | ५०   | २००  | ४०  | ४०   | ४०   | ४०   | ४०   |  |
| १.१५ | भेडाहा खोलाको किनारमा वांस रोपन                 | हे    | १०  | ५०   | ५००  | १०० | १००  | १००  | १००  | १००  |  |
| २    | <b>सामुदायिक विकास</b>                          |       |     |      |      |     |      |      |      |      |  |
| २.१  | सडक निर्माण मर्मत                               | कि.मी | १०  |      | ०    |     |      |      |      |      |  |
| २.२  | खानेपानी मर्मत                                  | वटा   | ४   | १००  | ४००  | ८०  | ८०   | ८०   | ८०   | ८०   |  |
| २.३  | चौतारा निर्माण                                  | वटा   | ४   | ४००  | १६०० | ३२० | ३२०  | ३२०  | ३२०  | ३२०  |  |
| २.४  | गोलघर                                           | वटा   | ४   | ४००  | १६०० | ३२० | ३२०  | ३२०  | ३२०  | ३२०  |  |
| २.५  | सा.व. भवन                                       | वटा   | ४   | १००० | ४००० | ८०० | ८००  | ८००  | ८००  | ८००  |  |
| २.६  | प्रवेशद्वार                                     | वटा   | ५   | ५००  | २५०० | ५०० | ५००  | ५००  | ५००  | ५००  |  |
| २.७  | खानेपानी पाइप विस्तार                           | मि    | २५० | ३    | ७५०  | २५० | २५०  | २५०  |      |      |  |
| २.८  | सांस्कृतिक भवन                                  | वटा   | १   | २५०० | २५०० | ५०० | ५००  |      |      |      |  |
| २.९  | पर्यटनको लागि काठबाट जनावरको मूर्ति बनाई राख्ने | वटा   | ५   | ५०   | २५०  | ५०  | ५०   | ५०   | ५०   | ५०   |  |
| २.१० | पर्यटकीय स्थल निर्माण                           | वटा   | ४   | १००० | ४००० |     | १००० | १००० | १००० | १००० |  |
| ३    | <b>आयआर्जन तथा सिप विकास</b>                    |       |     |      |      |     |      |      |      |      |  |
| ३.१  | तरकारी खेती तालिम                               | पटक   | २   | ५०   | १००  | ५०  |      | ५०   |      |      |  |
| ३.२  | पशुपालन तालिम                                   | पटक   | २   | ५०   | १००  | ५०  |      |      | ५०   |      |  |
| ३.३  | कृषि सहकारी गठन                                 | पटक   | २   | २०   | ४०   |     |      |      |      |      |  |
| ३.४  | पर्यटन मध्यवर्ती सहकारी गठन                     | पटक   | १   | १०   | १०   |     |      |      |      | १०   |  |
| ३.५  | हाउस वायरिङ तालिम                               | पटक   | १   | ३००  | ३००  |     |      |      |      | ३००  |  |

|      |                                          |      |   |     |     |     |     |     |     |     |  |
|------|------------------------------------------|------|---|-----|-----|-----|-----|-----|-----|-----|--|
| ३.६  | प्लम्बीड तालिम                           | पटक  | १ | ३०० | ३०० | ३०० |     |     |     |     |  |
| ३.७  | डकमी, सिकमी तालिम                        | पटक  | १ | ७५  | ७५  |     |     | ७५  |     |     |  |
| ३.८  | मोबाइल रिपेरीड तालिम                     | पटक  | १ | १५  | १५  |     |     |     | १५  |     |  |
| ३.९  | महिलालाई ड्राइभिड तालिम                  | पटक  | १ | ५०  | ५०  |     |     |     |     | ५०  |  |
| ३.१  | नेतृत्व विकास तालिम                      | पटक  | ३ | ५०  | १५० | ५०  | ५०  | ५०  |     |     |  |
| ३.११ | लेखा तालिम                               | पटक  | १ | १०० | १०० | १०० |     |     |     | १०० |  |
| ३.१२ | च्याउ खेती तालिम                         | पटक  | २ | २५  | ५०  | २५  |     |     | २५  |     |  |
| ३.१३ | कम्प्युटर तालिम                          | पटक  | १ | १०० | १०० |     |     |     |     | १०० |  |
| ३.१४ | मौरी पालन तालिम                          | पटक  | १ | ७.५ | ७.५ |     |     |     |     | ७.५ |  |
| ३.१५ | होमस्टे सञ्चालन तालिम                    | पटक  | १ | ५०  | ५०  | ५०  |     |     | ५०  |     |  |
| ३.१६ | कुक तालिम                                | पटक  | १ | ५०  | ५०  |     |     | ५०  |     |     |  |
| ३.१७ | नर्सरी खोल्ने सहयोग                      | वटा  | १ | २०० | २०० |     |     |     | २०० |     |  |
| ३.१८ | बिउ उत्पादन तालिम                        | पटक  | २ | २५  | ५०  |     |     | २५  |     | २५  |  |
| ४    | <b>संरक्षण शिक्षा</b>                    |      |   |     |     |     |     |     |     |     |  |
| ४.१  | CBAPU परिचालन                            | पटक  | ५ | १०० | ५०० | १०० | १०० | १०० | १०० | १०० |  |
| ४.२  | Eco-club परिचालन                         | वर्ष | ५ | ६०  | ३०० | ६०  | ६०  | ६०  | ६०  | ६०  |  |
| ४.३  | संरक्षण सम्बन्धि निती नियमको अर्न्तकृया  | पटक  | ५ | ५०  | २५० | ५०  | ५०  | ५०  | ५०  | ५०  |  |
| ४.४  | मानव वन्यजन्तु द्वन्द्व न्यूनीकरण गाष्ठी | पटक  | ५ | ६०  | ३०० | ६०  | ६०  | ६०  | ६०  | ६०  |  |
| ४.५  | अध्ययन अवलोकन भ्रमण                      | पटक  | ५ | ५०  | २५० | ५०  | ५०  | ५०  | ५०  | ५०  |  |
| ४.६  | संरक्षण दिवश आयोजना                      | पटक  | १ | ५०  | ५०  | १०  | १०  | १०  | १०  | १०  |  |

|      |                         |      |   |     |     |       |       |       |       |         |  |
|------|-------------------------|------|---|-----|-----|-------|-------|-------|-------|---------|--|
| ५    | प्रशासनिक               |      |   |     |     |       |       |       |       |         |  |
| ५.१  | कार्यालय सहयोगी         | जना  | ५ | १९५ | ९७५ | १९५   | १९५   | १९५   | १९५   | १९५     |  |
| ५.२  | मसलन्द                  | वर्ष | ५ | ३०  | १५० | ३०    | ३०    | ३०    | ३०    | ३०      |  |
| ५.३  | विद्युत पानी            | वर्ष | ५ | १०  | ५०  | १०    | १०    | १०    | १०    | १०      |  |
| ५.४  | मसलन्द                  | वर्ष | ५ | ५०  | २५० | ५०    | ५०    | ५०    | ५०    | ५०      |  |
| ५.५  | मिटिडमा खाजा            | पटक  | ५ | १५  | ७५  | १५    | १५    | १५    | १५    | १५      |  |
| ५.६  | इन्टरनेट                | वर्ष | ५ | १२  | ६०  | १२    | १२    | १२    | १२    | १२      |  |
| ५.७  | सञ्चार                  | वर्ष | ५ | ६०  | ३०० | ६०    | ६०    | ६०    | ६०    | ६०      |  |
| ५.८  | भ्रमण यातायात           | पटक  | ५ | ५०  | २५० | ५०    | ५०    | ५०    | ५०    | ५०      |  |
| ५.९  | ओभरहेड प्रोजेक्टर       | वटा  | १ | ७५  | ७५  |       |       |       | ७५    |         |  |
| ५.१० | डिजिटल क्यामेरा         | वटा  | १ | ५०  | ५०  | ५०    |       |       |       |         |  |
| ५.११ | मर्मत सम्भार            | वर्ष | ५ | २०  | १०० | २०    | २०    | २०    | २०    | २०      |  |
| ५.१२ | पञ्च वर्षिय योजना तयारी | वर्ष | १ | २५  | २५  |       |       |       | २५    |         |  |
|      | जम्मा                   |      |   |     |     | १६१०९ | १६४८४ | १६१८४ | १६१२४ | १६२७६.५ |  |

पर्सा राष्ट्रिय निकुञ्ज मध्यवर्ती क्षेत्र  
अमलेश्वर उपभोक्ता समिति  
रकम रु .००० (हजार)

| सि.नं. | कार्यक्रम                          | इकाई  | परिमाण | रकम  | जम्मा रकम | १    | २    | ३    | ४    | ५    |               |
|--------|------------------------------------|-------|--------|------|-----------|------|------|------|------|------|---------------|
| १      | संरक्षण                            |       |        |      |           |      |      |      |      |      |               |
| १.१    | सा.व. हस्तान्तरण                   | वटा   | ४      | १००  | ४००       | ८०   | ८०   | ८०   | ८०   | ८०   |               |
| १.२    | चुरियामाई सा.व. नविकरण             | वटा   | १      | ५०   | ५०        | १०   | १०   | १०   | १०   | १०   |               |
| १.३    | चुरियामाई सा.व. को क्षेत्र विस्तार | वटा   | १      | १००  | १००       | २०   | २०   | २०   | २०   | २०   |               |
| १.४    | भू संरक्षणको लागि चेक डयाम         | पटक   | ५      | १००० | ५०००      | १००० | १००० | १००० | १००० | १००० | स्थानीय सरकार |
| १.५    | आवादि निकुञ्ज र सा.व सिमाङ्कन      | कि.मी | ४      | ५००  | २०००      | ४००  | ४००  | ४००  | ४००  | ४००  |               |
| १.६    | पानी मुहान संरक्षण                 | वटा   | ६      | ५००  | ३०००      | ६००  | ६००  | ६००  | ६००  | ६००  |               |
| १.७    | फोहोर व्यवस्थापन                   | पटक   | ५      | ५०   | २५०       | ५०   | ५०   | ५०   | ५०   | ५०   |               |
| १.८    | अग्नी रेखा निर्माण                 | कि.मी | ५      | ३००  | १५००      | ३००  | ३००  | ३००  | ३००  | ३००  |               |
| १.९    | मचान निर्माण                       | वटा   | ५      | ८००  | ४०००      | ८००  | ८००  | ८००  | ८००  | ८००  |               |
| १.१०   | पर्यटकको पथ निर्माण                | कि.मी | ५      | ५००  | २५००      | ५००  | ५००  | ५००  | ५००  | ५००  |               |
| १.११   | ऐतिहासिक पोखरी मर्मत सम्भार        | वटा   | ५      | ५००  | २५००      | ५००  | ५००  | ५००  | ५००  | ५००  |               |
| १.१२   | घाँसे मैदान निर्माण                | हे    | १०     | ५०   | ५००       | १००  | १००  | १००  | १००  | १००  |               |
| २      | सामुदायिक विकास                    |       |        |      |           |      |      |      |      |      |               |
| २.१    | सार्वजनिक शौचालय                   | वटा   | २      | २००  | ४००       | २००  |      | २००  |      |      |               |
| २.२    | उ.स. भवन निर्माण                   | वटा   | १      | १५०० | १५००      | ७५०  | ७५०  |      |      |      |               |

|      |                                            |       |    |      |       |      |      |      |      |      |  |
|------|--------------------------------------------|-------|----|------|-------|------|------|------|------|------|--|
| २.३  | चुरियामाई सा.व.को भवन<br>जानेद्वार निर्माण | वटा   | १  | ५००  | ५००   |      |      | २५०  | २५०  |      |  |
| २.४  | सामुदायिक/सास्कृतिक भवन                    | वटा   | १  | १००० | १०००  |      |      |      | ५००  | ५००  |  |
| २.५  | सडक ग्राभेलिङ                              | कि.मी | ५  | ३००० | १५००० | ३००० | ३००० | ३००० | ३००० | ३००० |  |
| २.६  | सिचाई कुलो निर्माण                         | कि.मी | २  | ४००  | ८००   | १६०  | १६०  | १६०  | १६०  | १६०  |  |
| २.७  | सिचाई कुलो मर्मत                           | कि.मी | १  | २००  | २००   | ४०   | ४०   | ४०   | ४०   | ४०   |  |
| २.८  | काठे पुल मर्मत                             | वटा   | ५  | २५०  | १२५०  | २५०  | २५०  | २५०  | २५०  | २५०  |  |
| २.९  | समूह घर निर्माण                            | वटा   | ५  | ५००  | २५००  | ५००  | ५००  | ५००  | ५००  | ५००  |  |
| ३    | आयआर्जन तथा सिप विकास                      |       |    |      |       |      |      |      |      |      |  |
| ३.१  | कुक् तालिम                                 | पटक   | ५  | १००  | ५००   | १००  | १००  | १००  | १००  | १००  |  |
| ३.२  | नेचर गाइड तालिम                            | पटक   | २  | ३००  | ६००   | ३००  |      |      |      | ३००  |  |
| ३.३  | हाउस वायरिङ तालिम                          | पटक   | १  | १५०  | १५०   |      | १५०  |      |      |      |  |
| ३.४  | प्लम्बीङ तालिम                             | पटक   | १  | २००  | २००   |      |      | २००  |      |      |  |
| ३.५  | होम स्टे सञ्चालन तालिम                     | पटक   | २  | ५०   | १००   | ५०   |      |      |      | ५०   |  |
| ३.६  | मोबाईल मर्मत तालिम                         | पटक   | ३  | १५०  | ४५०   | १५०  |      | १५०  |      | १५०  |  |
| ३.७  | मोटर/साइकल मर्मत                           | पटक   | २  | २५०  | ५००   |      | २५०  |      | २५०  |      |  |
| ३.८  | फेसन डिजाइन तालिम                          | पटक   | १  | २००  | २००   |      |      | २००  |      |      |  |
| ३.९  | ब्युटी पार्लर तालिम                        | पटक   | १  | ३५०  | ३५०   | ७०   | ७०   | ७०   | ७०   | ७०   |  |
| ३.१० | लेखा तालिम                                 | पटक   | ५  | ७५   | ३७५   | ७५   | ७५   | ७५   | ७५   | ७५   |  |
| ३.११ | बेमौसमी तरकारी खेती तालिम                  | पटक   | २  | १००  | २००   |      | १००  |      | १००  |      |  |
| ३.१२ | च्याउ खेती तालिम                           | पटक   | २  | ५०   | १००   | ५०   |      |      |      | ५०   |  |
| ३.१३ | उन्नत जातको बोका वितरण                     | वटा   | ११ | ३०   | ३३०   | ६६   | ६६   | ६६   | ६६   | ६६   |  |

|      |                                     |      |    |     |     |     |     |     |     |     |  |
|------|-------------------------------------|------|----|-----|-----|-----|-----|-----|-----|-----|--|
| ३.१४ | कुखुरापालन तालिम                    | पटक  | ३  | ५०  | १५० | ५०  |     | ५०  |     | ५०  |  |
| ३.१५ | भेटेरनरी तालिम सहयोग                | पटक  | १  | ६०  | ६०  |     |     |     | ६०  |     |  |
| ३.१६ | उन्नत जातको गाई पालन तालिम          | पटक  | १  | ५०  | ५०  | ५०  |     |     |     |     |  |
| ३.१७ | वगुर पालन तालिम                     | पटक  | २  | ५०  | १०० |     | ५०  |     |     | ५०  |  |
| ४    | <b>संरक्षण शिक्षा</b>               |      |    |     |     |     |     |     |     |     |  |
| ४.१  | CBAPU परिचालन                       | पटक  | ५  | ५०  | २५० | ५०  | ५०  | ५०  | ५०  | ५०  |  |
| ४.२  | Eco-club परिचालन                    | पटक  | ३  | ६०  | १८० | ३६  | ३६  | ३६  | ३६  | ३६  |  |
| ४.३  | संरक्षण दिवश                        | वर्ष | ५  | ५०  | २५० | ५०  | ५०  | ५०  | ५०  | ५०  |  |
| ४.४  | संरक्षण सम्बन्धी निती नियमको गोष्ठी | पटक  | ५  | ५०  | २५० | ५०  | ५०  | ५०  | ५०  | ५०  |  |
| ४.५  | अध्ययन अवलोकन भ्रमण                 | पटक  | २  | २०० | ४०० | २०० |     |     |     | २०० |  |
| ४.६  | होडिड बोर्ड                         | वटा  | २० | ३०  | ६०० | १२० | १२० | १२० | १२० | १२० |  |
| ४.७  | अमलेस्वरमा पर्यटन सम्बन्धि बोर्ड    | वटा  | ५  | १५  | ७५  | १५  | १५  | १५  | १५  | १५  |  |
| ५    | <b>प्रशासनिक</b>                    |      |    |     |     |     |     |     |     |     |  |
| ५.१  | कार्यालय सहयोगी                     | वर्ष | ५  | १९५ | ९७५ | १९५ | १९५ | १९५ | १९५ | १९५ |  |
| ५.२  | मसलन्द                              | वर्ष | ५  | ७५  | ३७५ | ७५  | ७५  | ७५  | ७५  | ७५  |  |
| ५.३  | सञ्चार, पत्रपत्रिका                 | वर्ष | ५  | २५  | १२५ | २५  | २५  | २५  | २५  | २५  |  |
| ५.४  | विजुली पानी                         | वर्ष | ५  | ३६  | १८० | ३६  | ३६  | ३६  | ३६  | ३६  |  |
| ५.५  | भ्रमण यातायात                       | वर्ष | ५  | ४८  | २४० | ४८  | ४८  | ४८  | ४८  | ४८  |  |
| ५.६  | मिटिड, गोष्ठी                       | वर्ष | ५  | ७२  | ३६० | ७२  | ७२  | ७२  | ७२  | ७२  |  |
| ५.७  | प्रीन्टर                            | वटा  | १  | ७५  | ७५  | ७५  |     |     |     |     |  |

|      |                         |     |   |    |     |       |       |       |       |       |  |
|------|-------------------------|-----|---|----|-----|-------|-------|-------|-------|-------|--|
| ५.८  | डिजिटल क्यामेरा         | वटा | १ | ६० | ६०  |       | ६०    |       |       |       |  |
| ५.९  | दराज                    | वटा | ३ | ५० | १५० |       |       | ५०    | ५०    | ५०    |  |
| ५.१० | पञ्च वर्षिय योजना तयारी | पटक | १ | १५ | १५  |       |       |       |       | १५    |  |
|      | <b>जम्मा</b>            |     |   |    |     | ११२६८ | १०७५३ | १०४९३ | १०६०३ | १०८०८ |  |

पर्सो राष्ट्रिय निकुञ्ज मध्यवर्ती क्षेत्र  
मनहरी उपभोक्ता समिति  
रकम रु .००० (हजार)

| सि.नं. | कार्यक्रम                          | इकाई  | परिमाण | रकम  | जम्मा रकम | १    | २    | ३    | ४    | ५    |  |
|--------|------------------------------------|-------|--------|------|-----------|------|------|------|------|------|--|
| १      | <b>संरक्षण</b>                     |       |        |      |           |      |      |      |      |      |  |
| १.१    | वनपथ                               | कि.मी | १०     | ५००  | ५०००      | १००० | १००० | १००० | १००० | १००० |  |
| १.२    | घेरबार (सोलार फेन्स मर्मत)         | कि.मी | ६      | १००  | ६००       | १२०  | १२०  | १२०  | १२०  | १२०  |  |
| १.३    | वन हेरालु                          | वर्ष  | २      | २४०  | ४८०       | ९६   | ९६   | ९६   | ९६   | ९६   |  |
| १.४    | मचान                               | वटा   | ५      | ८००  | ४०००      | ८००  | ८००  | ८००  | ८००  | ८००  |  |
| १.५    | घांसे मैदान                        | वटा   | ५      | ३००  | १५००      | ३००  | ३००  | ३००  | ३००  | ३००  |  |
| १.६    | पानी पोखरी                         | वटा   | ३      | १००  | ३००       | ६०   | ६०   | ६०   | ६०   | ६०   |  |
| १.७    | सा.व. नविकरण                       | वटा   | १      | ५०   | ५०        | १०   | १०   | १०   | १०   | १०   |  |
| १.८    | सोलार फेन्स प्रविधिक               | वर्ष  | ५      | १२०  | ६००       | १२०  | १२०  | १२०  | १२०  | १२०  |  |
| १.९    | आवादी र ऐलानी सिमाकन               | कि.मी | १०     | ४००  | ४०००      | ८००  | ८००  | ८००  | ८००  | ८००  |  |
| १.१०   | अतिक्रमित हटाई जग्गामा ताल निर्माण | हे    | १०     | १००० | १००००     | २००० | २००० | २००० | २००० | २००० |  |
| १.११   | प्रवेशद्वार प्रतापपुर              | वटा   | १      | १००० | १०००      | ५००  | ५००  |      |      |      |  |

|      |                                     |       |    |      |      |     |     |     |     |     |  |
|------|-------------------------------------|-------|----|------|------|-----|-----|-----|-----|-----|--|
| १.१२ | वृक्षारोपन                          | हे    | १० | ५०   | ५००  | १०० | १०० | १०० | १०० | १०० |  |
| २    | <b>सामुदायिक विकास</b>              |       |    |      |      |     |     |     |     |     |  |
| २.१  | प्रतापपुर पार्किङ्ग निर्माण         | वटा   | १  | ९००  | ९००  |     | ३०० | ३०० | ३०० |     |  |
| २.२  | पर्यापर्यटन सुचना केन्द्र           | वटा   | १  | १५०० | १५०० |     |     | ५०० | ५०० | ५०० |  |
| २.३  | होमस्टे सहयोग                       | वटा   | १५ | १५०  | २२५० | ४५० | ४५० | ४५० | ४५० | ४५० |  |
| २.४  | पर्यापर्यटन मार्ग                   | कि.मी | ३  | ५००  | १५०० |     |     | ५०० | ५०० | ५०० |  |
| २.५  | सांस्कृतिक भवन                      | वटा   | १  | ९००  | ९००  | ३०० | ३०० | ३०० |     |     |  |
| २.६  | रमौली देखि प्रतापपुर पारि जाने बाटो | कि.मी | १  | ७००  | ७००  | १४० | १४० | १४० | १४० | १४० |  |
| ३    | <b>आयआर्जन तथा सिप विकास</b>        |       |    |      |      |     |     |     |     |     |  |
| ३.१  | बाख्रा पालने तालिम                  | पटक   | २  | ५०   | १००  | ५०  |     | ५०  |     |     |  |
| ३.२  | सुरक्षित बाख्रा खोर                 | पटक   | २  | ५०   | १००  | ५०  |     |     | ५०  |     |  |
| ३.३  | तरकारी खेती तालिम                   | पटक   | ३  | ५०   | १५०  | ५०  |     | ५०  |     | ५०  |  |
| ३.४  | प्लम्बीङ तालिम                      | पटक   | २  | ५०   | १००  | २०  |     |     | २०  |     |  |
| ३.५  | मोबाईल मर्मत तालिम                  | पटक   | २  | १००  | २००  |     |     |     | १०० | १०० |  |
| ३.६  | मोटर मर्मत तालिम                    | पटक   | २  | ७५   | १५०  | ७५  |     |     | ७५  |     |  |
| ३.७  | सिकर्मी तालिम                       | पटक   | ३  | ७५   | २२५  | ७५  |     |     | ७५  | ७५  |  |
| ३.८  | उन्नत जातको बोका वितरण              | वटा   | १० | २५   | २५०  | ५०  | ५०  | ५०  | ५०  | ५०  |  |
| ३.९  | ड्रागन फुट तालिम                    | पटक   | ३  | ९०   | २७०  | ९०  | ९०  |     |     | ९०  |  |
| ३.१० | नेचर गाइड तालिम                     | पटक   | २  | ७५   | १५०  |     | ७५  |     | ७५  |     |  |
| ३.११ | कुक तालिम                           | पटक   | ३  | २००  | ६००  | २०० | २०० |     |     | २०० |  |
| ४    | <b>संरक्षण शिक्षा</b>               |       |    |      |      |     |     |     |     |     |  |

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|------|-----------------------------------------|------|----|-----|-----|-----|-----|-----|-----|-----|--|
| ४.१  | CBAPU परिचालन                           | पटक  | ५  | ५०  | २५० | ५०  | ५०  | ५०  | ५०  | ५०  |  |
| ४.२  | Eco-club परिचालन                        | पटक  | ५  | ५०  | २५० | ५०  | ५०  | ५०  | ५०  | ५०  |  |
| ४.३  | समुह परिचालन सहयोग                      |      |    | ०   | ०   | ०   | ०   | ०   | ०   | ०   |  |
| ४.४  | होडिड बोर्ड                             | वटा  | १० | १५  | १५० | ३०  | ३०  | ३०  | ३०  | ३०  |  |
| ४.५  | संरक्षण दिवश समारोह                     | वर्ष | ५  | ५०  | २५० | ५०  | ५०  | ५०  | ५०  | ५०  |  |
| ४.६  | संरक्षण सम्बन्धी निती नियमको अर्न्तकृया | पटक  | ५  | ५०  | २५० | ५०  | ५०  | ५०  | ५०  | ५०  |  |
| ४.७  | अध्ययन अवलोकन भ्रमण                     | पटक  | २  | २०० | ४०० | २०० |     |     |     | २०० |  |
| ४.८  | मानव वन्यजन्तु द्वन्द न्युनीकरण गोष्ठी  | पटक  | ५  | ५०  | २५० | ५०  | ५०  | ५०  | ५०  | ५०  |  |
| ५    | <b>प्रशासनिक</b>                        |      |    | ०   | ०   | ०   | ०   | ०   | ०   | ०   |  |
| ५.१  | कार्यालय सहयोगी                         | जना  | ५  | १९५ | ९७५ | १९५ | १९५ | १९५ | १९५ | १९५ |  |
| ५.२  | मसलन्द                                  | वर्ष | ५  | ६०  | ३०० | ६०  | ६०  | ६०  | ६०  | ६०  |  |
| ५.३  | मोबाइल, सञ्चार                          | वर्ष | ५  | ६०  | ३०० | ६०  | ६०  | ६०  | ६०  | ६०  |  |
| ५.४  | पानी                                    | वर्ष | ५  | ६०  | ३०० | ६०  | ६०  | ६०  | ६०  | ६०  |  |
| ५.५  | विजुली वत्ती                            | वर्ष | ५  | ३०  | १५० | ३०  | ३०  | ३०  | ३०  | ३०  |  |
| ५.६  | मिटिडमा खाजा                            | पटक  | ५  | २५  | १२५ | २५  | २५  | २५  | २५  | २५  |  |
| ५.७  | इन्टरनेट                                | वर्ष | ५  | १०  | ५०  | १०  | १०  | १०  | १०  | १०  |  |
| ५.८  | भ्रमण खर्च                              | पटक  | ५  | ५०  | २५० | ५०  | ५०  | ५०  | ५०  | ५०  |  |
| ५.९  | ओभरहेड प्रोजेक्टर                       | वटा  | १  | ७५  | ७५  |     | ७५  |     |     |     |  |
| ५.१० | ल्यापटप                                 | वटा  | १  | १०० | १०० | १०० |     |     |     |     |  |
| ५.११ | पञ्च वर्षिय योजना तयारी                 | वर्ष | १  | १५  | १५  |     |     |     |     | १५  |  |

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|--|-------|--|--|--|--|------|------|------|------|------|--|
|  | जम्मा |  |  |  |  | ८५२६ | ८३५६ | ८५१६ | ८५११ | ८५३१ |  |
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पर्सो राष्ट्रिय निकुञ्ज मध्यवर्ती क्षेत्र  
उज्ज्वल भविष्य उपभोक्ता समिति  
रकम रु .००० (हजार)

| सि.नं. | कार्यक्रम                           | इकाई  | परिमाण | रकम | जम्मा रकम | १    | २    | ३    | ४    | ५    |               |
|--------|-------------------------------------|-------|--------|-----|-----------|------|------|------|------|------|---------------|
| १      | संरक्षण                             |       |        |     |           |      |      |      |      |      |               |
| १.१    | सा.व. नविकरण                        | वटा   | ४      | ५०  | २००       | ४०   | ४०   | ४०   | ४०   | ४०   |               |
| १.२    | वन हेरालु                           | वर्ष  | ५      | २६० | १३००      | २६०  | २६०  | २६०  | २६०  | २६०  |               |
| १.३    | खहरे नियन्त्रण                      | वटा   | २५     | ३०० | ७५००      | १५०० | १५०० | १५०० | १५०० | १५०० | स्थानीय सरकार |
| १.४    | बायो इन्जिनियरिङ                    | वटा   | २५     | ५०  | १२५०      | २५०  | २५०  | २५०  | २५०  | २५०  |               |
| १.५    | काँडेतार जाली घेरबार                | कि.मी | १५     | ३०० | ४५००      | ९००  | ९००  | ९००  | ९००  | ९००  | स्थानीय सरकार |
| १.६    | वृक्षारोपण                          | हे    | १०     | ५०  | ५००       | १००  | १००  | १००  | १००  | १००  |               |
| १.७    | सिमसार संरक्षण                      | वटा   | ७      | ५०  | ३५०       | ७०   | ७०   | ७०   | ७०   | ७०   |               |
| १.८    | घाँसे मैदान निर्माण                 | हे    | ८      | १०० | ८००       | १६०  | १६०  | १६०  | १६०  | १६०  |               |
| १.९    | वनपथ निर्माण                        | कि.मी | ८      | १०० | ८००       | १६०  | १६०  | १६०  | १६०  | १६०  |               |
| १.१    | सा.व. व्यवस्थापन तालिम              | पटक   | ५      | ५०  | २५०       | ५०   | ५०   | ५०   | ५०   | ५०   |               |
| १.११   | पानी पोखरी निर्माण                  | वटा   | ८      | २०० | १६००      | ३२०  | ३२०  | ३२०  | ३२०  | ३२०  |               |
| १.१२   | लामीटार/धनेशरी सा.व. मेसजाली घेरबार | कि.मी | २      | ३०० | ६००       | १२०  | १२०  | १२०  | १२०  | १२०  |               |

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| २    | सामुदायिक विकास              |       |     |      |      |     |     |     |     |     |  |
| २.१  | खानेपानी इन्टेक मर्मत सुधार  | वटा   | १५  | १५०  | २२५० | ४५० | ४५० | ४५० | ४५० | ४५० |  |
| २.२  | बाटो निर्माण मर्मत सुधार     | कि.मी | ५   | २००  | १००० | २०० | २०० | २०० | २०० | २०० |  |
| २.३  | खेलकुद मैदान                 | वटा   | ४   | ५००  | २००० |     | ५०० | ५०० | ५०० | ५०० |  |
| २.४  | सामुदायिक भवन                | वटा   | ४   | ५००  | २००० | ५०० | ५०० |     | ५०० | ५०० |  |
| २.५  | सांस्कृतिक भवन               | वटा   | १   | १००० | १००० | ५०० | ५०० |     |     |     |  |
| २.६  | सिचाइ कुलो मर्मत             | कि.मी | ८   | २५०  | २००० | ४०० | ४०० | ४०० | ४०० | ४०० |  |
| ३    | आयआर्जन तथा सिप विकास        |       |     |      |      |     |     |     |     |     |  |
| ३.१  | तरकारी खेती तालिम            | पटक   | २   | ५०   | १००  | ५०  |     | ५०  |     |     |  |
| ३.२  | पशुपालन तालिम                | पटक   | २   | ५०   | १००  |     | ५०  |     | ५०  |     |  |
| ३.३  | नेतृत्व विकास तालिम          | पटक   | ३   | ४५   | १३५  | ४५  |     | ४५  |     | ४५  |  |
| ३.४  | लेखा तालिम                   | पटक   | २   | ५०   | १००  | ५०  |     |     |     | ५०  |  |
| ३.५  | सहकारी व्यवस्थापन तालिम      | पटक   | २   | ५०   | १००  |     |     | ५०  | ५०  |     |  |
| ३.६  | हाउस वायरिड तालिम            | पटक   | २   | १५०  | ३००  | १५० |     | १५० |     |     |  |
| ३.७  | प्लम्बीड तालिम               | पटक   | २   | १५०  | ३००  |     |     | १५० |     | १५० |  |
| ३.८  | मोबाइल रिपेरीड तालिम         | पटक   | २   | १५   | ३०   | १५  |     |     |     | १५  |  |
| ३.९  | सिलाई बुनाई तालिम            | पटक   | २   | ७.५  | १५   |     |     | ७.५ | ७.५ |     |  |
| ३.१  | कुसन बनाउने तालिम            | पटक   | १   | ७.५  | ७.५  | ७.५ |     | ७.५ |     |     |  |
| ३.११ | फलफुल विरुवा वितरण           | वटा   | ५०० | ०.५  | २५०  | ५०  | ५०  | ५०  | ५०  | ५०  |  |
| ३.१२ | नश्ल सुधारको लागि बोका वितरण | वटा   | १२  | ५०   | ६००  | १२० | १२० | १२० | १२० | १२० |  |
| ३.१३ | विपन्न घरधुरीलाई बाखा वितरण  | वटा   | ४०  | २५   | १००० | २०० | २०० | २०० | २०० | २०० |  |

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| ३.१४ | बगुंरपालन तालिम                                              | पटक  | ३  | ७.५ | २२.५ |     |     | ७.५ | ७.५ | ७.५ |  |
| ३.१५ | कुखुरापालन तालिम                                             | पटक  | ३  | ७.५ | २२.५ |     |     | ७.५ | ७.५ | ७.५ |  |
| ४    | <b>संरक्षण शिक्षा</b>                                        |      |    |     |      |     |     |     |     |     |  |
| ४.१  | CBAPU परिचालन                                                | वर्ष | ५  | ५०  | २५०  | ५०  | ५०  | ५०  | ५०  | ५०  |  |
| ४.२  | Eco-club परिचालन                                             | वर्ष | ५  | ५०  | २५०  | ५०  | ५०  | ५०  | ५०  | ५०  |  |
| ४.३  | संरक्षण सम्बन्धि निती नियमको अर्न्तकृया                      | वर्ष | २  | ५०  | १००  |     | ५०  | ५०  |     |     |  |
| ४.४  | मानव वन्यजन्तु द्वन्द न्युनीकरण गोष्ठी                       | पटक  | ५  | १०० | ५००  | २५० |     |     | २५० |     |  |
| ४.५  | संरक्षण दिवश समारोह                                          | पटक  | ५  | १०० | ५००  | १०० | १०० | १०० | १०० | १०० |  |
| ४.६  | अध्ययन अवलोकन भ्रमण                                          | वर्ष | २  | ३०० | ६००  |     |     | ३०० |     | ३०० |  |
| ४.७  | Eco-club द्वारा विद्यालय स्तरीय संरक्षण सम्बन्धि प्रतियोगिता | वर्ष | ५  | ५०  | २५०  | ५०  | ५०  | ५०  | ५०  | ५०  |  |
| ४.८  | होडिड बोड                                                    | वटा  | १२ | २५  | ३००  | ६०  | ६०  | ६०  | ६०  | ६०  |  |
| ४.९  | सडक नाटक                                                     | पटक  | ३  | २५  | ७५   |     |     | २५  | २५  | २५  |  |
| ५    | <b>प्रशासनिक</b>                                             |      |    |     |      | ०   | ०   | ०   | ०   | ०   |  |
| ५.१  | कार्यालय सहयोगी                                              | वर्ष | ५  | १९५ | ९७५  | १९५ | १९५ | १९५ | १९५ | १९५ |  |
| ५.२  | मसलन्द                                                       | वर्ष | ५  | ३०  | १५०  | ३०  | ३०  | ३०  | ३०  | ३०  |  |
| ५.३  | सञ्चार                                                       | वर्ष | ५  | ६०  | ३००  | ६०  | ६०  | ६०  | ६०  | ६०  |  |
| ५.४  | विद्युत पानी                                                 | वर्ष | ५  | १०  | ५०   | १०  | १०  | १०  | १०  | १०  |  |
| ५.५  | भ्रमण यातायात                                                | वर्ष | ५  | ५०  | २५०  | ५०  | ५०  | ५०  | ५०  | ५०  |  |
| ५.६  | मिटिडमा खाजा                                                 | वर्ष | ५  | ४०  | २००  | ४०  | ४०  | ४०  | ४०  | ४०  |  |

|      |                           |      |   |     |     |        |      |      |      |      |  |
|------|---------------------------|------|---|-----|-----|--------|------|------|------|------|--|
| ५.७  | मर्मत सम्भार              | वर्ष | ५ | ५०  | २५० | ५०     | ५०   | ५०   | ५०   | ५०   |  |
| ५.८  | फर्निचर, कुर्सी खरीद      | पटक  | ३ | ७५  | २२५ |        |      | ७५   | ७५   | ७५   |  |
| ५.९  | कम्प्युटर र प्रिन्टर खरीद | वटा  | २ | १०० | २०० |        |      | १००  | १००  |      |  |
| ५.१० | पञ्च वर्षिय योजना तयारी   | वर्ष | १ | २५  | २५  |        |      |      |      | २५   |  |
|      | <b>जम्मा</b>              |      |   |     |     | ७६६२.५ | ७६९५ | ७६२० | ७६६८ | ७७९५ |  |

पर्सो राष्ट्रिय निकुञ्ज मध्यवर्ती क्षेत्र  
लोकहित उपभोक्ता समिति  
रकम रु .००० (हजार)

| सि.नं. | कार्यक्रम               | इकाई  | परिमाण | रकम | जम्मा रकम | १   | २   | ३   | ४   | ५   |               |
|--------|-------------------------|-------|--------|-----|-----------|-----|-----|-----|-----|-----|---------------|
| १      | <b>संरक्षण</b>          |       |        |     |           |     |     |     |     |     |               |
| १.१    | सा.व. नविकरण            | वटा   | ८      | ५०  | ४००       | ८०  | ८०  | ८०  | ८०  | ८०  |               |
| १.२    | वन हेरालु               | जना   | ४०     | ६०  | २४००      | ४८० | ४८० | ४८० | ४८० | ४८० |               |
| १.३    | मेस तारजाली घेरबार      | कि.मी | ५      | ३०० | १५००      | ३०० | ३०० | ३०० | ३०० | ३०० |               |
| १.४    | सिमसार संरक्षण          | वटा   | १५     | ५०  | ७५०       | १५० | १५० | १५० | १५० | १५० |               |
| १.५    | खहरे नियन्त्रण          | पटक   | ५      | ५०० | २५००      | ५०० | ५०० | ५०० | ५०० | ५०० | स्थानीय सरकार |
| १.६    | वृक्षारोपण              | हे    | २५     | ५०  | १२५०      | २५० | २५० | २५० | २५० | २५० |               |
| १.७    | मिचहा प्रजाती नियन्त्रण | हे    | १०     | ५०  | ५००       | १०० | १०० | १०० | १०० | १०० |               |
| १.८    | अग्नी रेखा निर्माण      | कि.मी | १५     | ३०  | ४५०       | ९०  | ९०  | ९०  | ९०  | ९०  |               |
| १.९    | सा.व. व्यवस्थापन तालिम  | पटक   | ५      | ५०  | २५०       | ५०  | ५०  | ५०  | ५०  | ५०  |               |

|      |                                                             |       |     |      |      |     |     |      |      |      |        |
|------|-------------------------------------------------------------|-------|-----|------|------|-----|-----|------|------|------|--------|
| १.१  | एक मुखे सुधारिएको चुलो                                      | वटा   | २५० | १०   | २५०० | ५०० | ५०० | ५००  | ५००  | ५००  |        |
| २    | <b>सामुदायिक विकास</b>                                      |       |     |      |      |     |     |      |      |      |        |
| २.१  | लोकहित बाट प्राकृतिक संरक्षणबाट पदम मिलन जोडने बाटो निर्माण | कि.मी | ५   | ३००  | १५०० | ३०० | ३०० | ३००  | ३००  | ३००  |        |
| २.२  | खेल मैदान निर्माण                                           | वटा   | १   | ५००  | ५००  | ५०० |     |      |      |      |        |
| २.३  | मचान                                                        | वटा   | ८   | ५००  | ४००० | ८०० | ८०० | ८००  | ८००  | ८००  |        |
| २.४  | उ.स को भवन जिर्णोद्धार                                      | वटा   | १   | ५००  | ५००  |     | ५०० |      |      |      |        |
| २.५  | सामुदायिक/सांस्कृतिक भवन                                    | वटा   | १   | १००० | १००० |     |     | १००० |      |      |        |
| २.६  | सा. व. को भवन                                               | वटा   | ८   | ५००  | ४००० | ८०० | ८०० | ८००  | ८००  | ८००  |        |
| २.७  | गोलघर निर्माण                                               | वटा   | ८   | ३००  | २४०० | ४८० | ४८० | ४८०  | ४८०  | ४८०  |        |
| २.८  | बाटो निर्माण मर्मत                                          | कि.मी | १०  | ३००  | ३००० | ६०० | ६०० | ६००  | ६००  | ६००  |        |
| २.९  | खानेपानी ट्याङ्की निर्माण                                   | वटा   | ३   | ५००  | १५०० | ५०० |     | ५००  |      | ५००  |        |
| २.१० | खानेपानी इन्टेक मर्मत                                       | वटा   | १६  | ३००  | ४८०० | ९६० | ९६० | ९६०  | ९६०  | ९६०  |        |
| २.११ | भुलुङ्गे पुल निर्माण                                        | वटा   | १   | ७५०० | ७५०० |     |     | २५०० | २५०० | २५०० | सिबिडी |
| २.१२ | खानेपानीको लागि बोरिङ                                       | वटा   | ८   | ५००  | ४००० | ८०० | ८०० | ८००  | ८००  | ८००  |        |
| ३    | <b>आयआर्जन तथा सिप विकास</b>                                |       |     |      |      |     |     |      |      |      |        |
| ३.१  | नेतृत्व विकास तालिम                                         | पटक   | ३   | ७५   | २२५  | ७५  |     |      | ७५   | ७५   |        |
| ३.२  | लेखा तालिम                                                  | पटक   | ५   | १००  | ५००  | १०० | १०० | १००  | १००  | १००  |        |
| ३.३  | लघु उद्यम बजारीकरण तालिम                                    | पटक   | ५   | १००  | ५००  | १०० | १०० | १००  | १००  | १००  |        |
| ३.४  | तरकारी खेती तालिम                                           | पटक   | २   | ७५   | १५०  |     |     |      | ७५   | ७५   |        |
| ३.५  | पशुपालन तालिम                                               | पटक   | २   | ७५   | १५०  |     | ७५  |      |      | ७५   |        |

|      |                                              |      |     |     |      |      |      |     |     |     |  |
|------|----------------------------------------------|------|-----|-----|------|------|------|-----|-----|-----|--|
| ३.६  | सुरक्षित बाखा खोर निर्माण                    | वटा  | १०० | ५०  | ५००० | २५०० | २५०० |     |     |     |  |
| ३.७  | बगुरपालन तालिम                               | पटक  | २   | ५०  | १००  |      | ५०   |     |     | ५०  |  |
| ३.८  | हाउस वायरिड तालिम                            | पटक  | २   | ५०  | १००  |      | ५०   |     | ५०  |     |  |
| ३.९  | प्लम्बीड तालिम                               | पटक  | २   | ५०  | १००  | २०   | २०   | २०  | २०  | २०  |  |
| ३.१  | मोबाइल रिपेरीड तालिम                         | पटक  | २   | १५  | ३०   |      | १५   |     |     | १५  |  |
| ३.११ | कम्प्युटर तालिम                              | पटक  | २   | ५०  | १००  |      | ५०   |     |     | ५०  |  |
| ३.१२ | सिलाई बुनाई तालिम                            | पटक  | २   | ५०  | १००  |      | ५०   |     | ५०  |     |  |
| ३.१३ | अनौपचारीक शिक्षा                             | पटक  | २   | ५०  | १००  |      | ५०   |     | ५०  |     |  |
| ३.१४ | होम स्टे तालिम                               | पटक  | २   | १०० | २००  |      | १००  |     | १०० |     |  |
| ३.१५ | कुक तालिम                                    | पटक  | २   | १०० | २००  |      |      |     | १०० | १०० |  |
| ३.१६ | ब्युटी पार्लर तालिम                          | पटक  | २   | ७५  | १५०  |      | ७५   |     | ७५  |     |  |
| ४.१  | संरक्षण शिक्षा                               |      |     |     |      |      |      |     |     |     |  |
| ४.२  | CBAPU परिचालन                                | वर्ष | ५   | ५०  | २५०  | ५०   | ५०   | ५०  | ५०  | ५०  |  |
| ४.३  | Eco-club परिचालन                             | वर्ष | ५   | ६०  | ३००  | ६०   | ६०   | ६०  | ६०  | ६०  |  |
| ४.४  | संरक्षण सम्बन्धि निती नियमको अर्न्तकृया      | पटक  | ५   | १०० | ५००  | १००  | १००  | १०० | १०० | १०० |  |
| ४.५  | मानव वन्यजन्तु द्वन्द्व न्युनीकरण गोष्ठी     | पटक  | ५   | १०० | ५००  | १००  | १००  | १०० | १०० | १०० |  |
| ४.६  | विद्यालय स्तरीय संरक्षण सम्बन्धि प्रतियोगिता | वर्ष | ५   | १०० | ५००  | १००  | १००  | १०० | १०० | १०० |  |
| ४.७  | अध्ययन अवलोकन भ्रमण                          | पटक  | २   | ३५० | ७००  |      | ३५०  |     | ३५० |     |  |
| ४.८  | संरक्षण दिवश आयोजना                          | वर्ष | ५   | १०० | ५००  | १००  | १००  | १०० | १०० | १०० |  |
| ५    | प्रशासनिक                                    |      |     |     |      |      |      |     |     |     |  |

|      |                         |      |   |     |     |       |       |       |       |       |  |
|------|-------------------------|------|---|-----|-----|-------|-------|-------|-------|-------|--|
| ५.१  | कार्यालय सहयोगी         | जना  | ५ | १९५ | ९७५ | १९५   | १९५   | १९५   | १९५   | १९५   |  |
| ५.२  | मसलन्द                  | वर्ष | ५ | ३०  | १५० | ३०    | ३०    | ३०    | ३०    | ३०    |  |
| ५.३  | सञ्चार                  | वर्ष | ५ | ७५  | ३७५ | ७५    | ७५    | ७५    | ७५    | ७५    |  |
| ५.४  | बिजुली, पानी            | वर्ष | ५ | ३६  | १८० | ३६    | ३६    | ३६    | ३६    | ३६    |  |
| ५.५  | मिटिडमा खाजा            | पटक  | ५ | २५  | १२५ | २५    | २५    | २५    | २५    | २५    |  |
| ५.६  | भ्रमण यातायात           | पटक  | ५ | ७५  | ३७५ | ७५    | ७५    | ७५    | ७५    | ७५    |  |
| ५.७  | कम्प्युटर               | वटा  | १ | १०० | १०० |       |       |       | १००   |       |  |
| ५.८  | प्रीन्टर                | वटा  | १ | ५०  | ५०  |       |       |       |       | ५०    |  |
| ५.९  | मर्मत सम्भार            | वर्ष | ५ | ५०  | २५० | ५०    | ५०    | ५०    | ५०    | ५०    |  |
| ५.१० | पञ्च वर्षिय योजना तयारी | पटक  | १ | २५  |     |       |       |       |       | २५    |  |
|      | जम्मा                   |      |   |     |     | १२०३१ | १२३२१ | १२४५६ | ११९८१ | ११९७१ |  |

पर्सो राष्ट्रिय निकुञ्ज मध्यवर्ती क्षेत्र  
लोकप्रिय उपभोक्ता समिति  
रकम रु .००० (हजार)

| सि.नं. | कार्यक्रम    | इकाई | परिमाण | रकम | जम्मा रकम | १   | २   | ३   | ४   | ५   |  |
|--------|--------------|------|--------|-----|-----------|-----|-----|-----|-----|-----|--|
| १      | संरक्षण      |      |        |     |           |     |     |     |     |     |  |
| १.१    | सा.व. नविकरण | वटा  | ३      | ५०  | १५०       | ३०  | ३०  | ३०  | ३०  | ३०  |  |
| १.२    | वन हेरालु    | जना  | ३      | १२० | ३६०       | ७२  | ७२  | ७२  | ७२  | ७२  |  |
| १.३    | घांसे मैदान  | हे   | १०     | १५० | १५००      | ३०० | ३०० | ३०० | ३०० | ३०० |  |
| १.४    | पानी पोखरी   | वटा  | ६      | ५०  | ३००       | ६०  | ६०  | ६०  | ६०  | ६०  |  |

|     |                                                |       |    |      |      |      |      |      |      |      |  |
|-----|------------------------------------------------|-------|----|------|------|------|------|------|------|------|--|
| १.५ | वनपथ निर्माण                                   | कि.मी | ५  | ५००  | २५०० | ५००  | ५००  | ५००  | ५००  | ५००  |  |
| १.६ | मचान निर्माण                                   | वटा   | ५  | ८००  | ४००० | ८००  | ८००  | ८००  | ८००  | ८००  |  |
| १.७ | सा.व.र आवादी बाट बच्च<br>घेरबार तारजाली        | कि.मी | ५  | ३००  | १५०० | ३००  | ३००  | ३००  | ३००  | ३००  |  |
| १.८ | खानेपानी मुहान संरक्षण                         | वटा   | ५  | २००  | १००० | २००  | २००  | २००  | २००  | २००  |  |
| २   | <b>सामुदायिक विकास</b>                         |       |    |      |      |      |      |      |      |      |  |
| २.१ | जिप सफारी र पर्यापर्यटनको<br>लागि वनपथ निर्माण | कि.मी | १० | ५००  | ५००० | १००० | १००० | १००० | १००० | १००० |  |
| २.२ | सिचाई कुलो लाईनड                               | कि.मी | ३  | १००० | ३००० | ६००  | ६००  | ६००  | ६००  | ६००  |  |
| २.३ | खानेपानी मर्मत                                 | वटा   | ५  | २००  | १००० | २००  | २००  | २००  | २००  | २००  |  |
| २.४ | सास्कृतिक भवन                                  | वटा   | १  | १००० | १००० | ५००  | ५००  |      |      |      |  |
| २.५ | उपभोक्ता समिति निर्माण                         | वटा   | १  | १५०० | १५०० |      |      | ७५०  | ७५०  |      |  |
| २.६ | खेलकुद मैदान निर्माण                           | वटा   | १  | १००० | १००० |      |      |      | ५००  | ५००  |  |
| २.७ | सिचाईको लागि पानी टंयाकी                       | वटा   | ५  | ३००  | १५०० | ३००  | ३००  | ३००  | ३००  | ३००  |  |
| ३   | <b>आयआर्जन तथा सिप विकास</b>                   |       |    | ०    |      |      |      |      |      |      |  |
| ३.१ | होम स्टेको लागि सहयोग                          | वटा   | १० | २००  | २००० | ४००  | ४००  | ४००  | ४००  | ४००  |  |
| ३.२ | सावुन बनाउने तालिम                             | पटक   | २  | ५०   | १००  | ५०   |      |      | ५०   |      |  |
| ३.३ | कसन, डल बनाउने तालिम                           | पटक   | ३  | १००  | ३००  | १००  |      | १००  |      | १००  |  |
| ३.४ | पोते, क्रिस्टल माला बनाउने<br>तालिम            | पटक   | २  | ५०   | १००  |      | ५०   |      | ५०   |      |  |
| ३.५ | मैन वत्ती बनाउने तालिम                         | पटक   | २  | ६०   | १२०  | ६०   |      |      |      | ६०   |  |
| ३.६ | बेमौसमी तरकारी खेती तालिम                      | पटक   | ३  | ७५   | २२५  | ७५   |      | ७५   |      | ७५   |  |
| ३.७ | उन्नत जातको बाख्रा, बोका                       | वटा   | १० | ५०   | ५००  | १००  | १००  | १००  | १००  | १००  |  |

|      |                                         |      |    |     |      |     |     |     |     |     |  |
|------|-----------------------------------------|------|----|-----|------|-----|-----|-----|-----|-----|--|
|      | वितरण                                   |      |    |     |      |     |     |     |     |     |  |
| ३.८  | पशुपालन तालिम                           | पटक  | २  | ७५  | १५०  |     |     | ७५  |     | ७५  |  |
| ३.९  | कुखुरापालन तालिम                        | पटक  | २  | ५०  | १००  | ५०  |     |     |     | ५०  |  |
| ३.१० | हाउस वायरिड तालिम                       | पटक  | १  | १०० | १००  |     | ५०  |     | ५०  |     |  |
| ३.११ | मोटर/साइकल मर्मत                        | पटक  | १  | ५०  | ५०   |     |     |     |     | ५०  |  |
| ३.१२ | मोबाईल मर्मत तालिम                      | पटक  | २  | २५  | ५०   | २५  |     |     |     | २५  |  |
| ३.१३ | सिचाईको लागि पाइप २० रोल                | रोल  | २० | ७५  | १५०० | ३०० | ३०० | ३०० | ३०० | ३०० |  |
| ३.१४ | नेतृत्व विकास तालिम                     | पटक  | ५  | ७५  | ३७५  | ७५  | ७५  | ७५  | ७५  | ७५  |  |
| ३.१५ | लेखा तालिम                              | पटक  | ५  | ५०  | २५०  | ५०  | ५०  | ५०  | ५०  | ५०  |  |
| ३.१६ | स्प्रिडकल सिचाई वितरण                   | पटक  | ५  | २०० | १००० | २०० | २०० | २०० | २०० | २०० |  |
| ३.१७ | आइपिएम तालिम                            | पटक  | २  | ३०० | ६००  |     | ३०० |     |     | ३०० |  |
| ४    | संरक्षण शिक्षा                          |      |    | ०   |      |     |     |     |     |     |  |
| ४.१  | CBAPU परिचालन                           | वर्ष | ५  | ५०  | २५०  | ५०  | ५०  | ५०  | ५०  | ५०  |  |
| ४.२  | Eco-club सहयोग                          | वर्ष | ५  | २५  | १२५  | २५  | २५  | २५  | २५  | २५  |  |
| ४.३  | वालक्लब सहयोग                           | वर्ष | ५  | २०  | १००  | २०  | २०  | २०  | २०  | २०  |  |
| ४.४  | अध्ययन अवलोकन भ्रमण                     | पटक  | २  | २०० | ४००  |     | २०० |     |     | २०० |  |
| ४.५  | लागु पदार्थ दुर्ब्यसनी लागि सचेतना      | पटक  | ५  | २५  | १२५  | २५  |     | २५  |     | २५  |  |
| ४.६  | संरक्षण सम्बन्धी निती नियमको अर्न्तकृया | पटक  | ५  | ५०  | २५०  | ५०  | ५०  | ५०  | ५०  | ५०  |  |
| ४.७  | मानव वन्यजन्तु द्वन्द न्युनीकरण         | पटक  | ५  | ५०  | २५०  | ५०  | ५०  | ५०  | ५०  | ५०  |  |
| ४.८  | संरक्षण दिवश                            | पटक  | ५  | ५०  | २५०  | ५०  | ५०  | ५०  | ५०  | ५०  |  |

|      |                                              |      |    |     |     |      |      |      |      |      |  |
|------|----------------------------------------------|------|----|-----|-----|------|------|------|------|------|--|
| ४.९  | होडिड बोर्ड                                  | वटा  | २० | २५  | ५०० | १००  | १००  | १००  | १००  | १००  |  |
| ४.१० | विद्यालय स्तरीय संरक्षण सम्बन्धी प्रतियोगिता | पटक  | ५  | ५०  | २५० | ५०   | ५०   | ५०   | ५०   | ५०   |  |
| ४.११ | स्थानीय कल्बबाट सडक नाटक आयोजना              | पटक  | ५  | ३०  | १५० | ३०   | ३०   | ३०   | ३०   | ३०   |  |
| ४.१२ | छात्रवृद्धि प्रदान                           | पटक  | ५  | ५०  | २५० | ५०   | ५०   | ५०   | ५०   | ५०   |  |
| ५    | <b>प्रशासनिक</b>                             |      |    |     |     |      |      |      |      |      |  |
| ५.१  | कार्यालय सहयोगी                              | जना  | ५  | १९५ | ९७५ | १९५  | १९५  | १९५  | १९५  | १९५  |  |
| ५.२  | इन्टरनेट                                     | वर्ष | ५  | १२  | ६०  | १२   | १२   | १२   | १२   | १२   |  |
| ५.३  | मसलन्द                                       | वर्ष | ५  | ३०  | १५० | ३०   | ३०   | ३०   | ३०   | ३०   |  |
| ५.४  | सञ्चार                                       | वर्ष | ५  | ३६  | १८० | ३६   | ३६   | ३६   | ३६   | ३६   |  |
| ५.५  | विजुली पानी, बत्ती                           | वर्ष | ५  | २४  | १२० | २४   | २४   | २४   | २४   | २४   |  |
| ५.६  | मिटिडमा खाजा                                 | पटक  | ५  | ६०  | ३०० | ६०   | ६०   | ६०   | ६०   | ६०   |  |
| ५.७  | भ्रमण यातायात                                | पटक  | ५  | ७५  | ३७५ | ७५   | ७५   | ७५   | ७५   | ७५   |  |
| ५.८  | कम्प्युटर                                    | वटा  | १  | ७५  | ७५  | ७५   |      |      |      |      |  |
| ५.९  | प्रीन्टर                                     | वटा  | १  | ५०  | ५०  |      | ५०   |      |      |      |  |
| ५.१० | पञ्च वर्षिय योजना तयारी                      | वर्ष | १  | २५  | २५  |      |      |      |      | २५   |  |
|      | <b>जम्मा</b>                                 |      |    |     |     | ७३५४ | ७५४४ | ७४१९ | ७७९४ | ७८७९ |  |

पर्सो राष्ट्रिय निकुञ्ज मध्यवर्ती क्षेत्र  
प्रकृतिक संरक्षण उपभोक्ता समिति  
रकम रु .००० (हजार)

| सि.नं. | कार्यक्रम                              | इकाई  | परिमाण | रकम  | जम्मा रकम | १    | २    | ३    | ४    | ५    |               |
|--------|----------------------------------------|-------|--------|------|-----------|------|------|------|------|------|---------------|
| १      | संरक्षण                                |       |        |      |           |      |      |      |      |      |               |
| १.१    | सा.व. नविकरण                           | वटा   | ८      | ४५   | ३६०       | ७२   | ७२   | ७२   | ७२   | ७२   |               |
| १.२    | वन हेरालु                              | जना   | ४०     | ६०   | २४००      | ४८०  | ४८०  | ४८०  | ४८०  | ४८०  |               |
| १.३    | तारजाली घेरबार                         | कि.मी | ३      | ३००  | ९००       | १८०  | १८०  | १८०  | १८०  | १८०  |               |
| १.४    | पानी मुहान संरक्षण                     | वटा   | ३      | ५००  | १५००      | ३००  | ३००  | ३००  | ३००  | ३००  |               |
| १.५    | विद्युतीय तारबार मर्मत                 | कि.मि | ५०     | ७५   | ३७५०      | ७५०  | ७५०  | ७५०  | ७५०  | ७५०  |               |
| १.६    | वनपथ निर्माण तथा मर्मत                 | कि.मी | १५     | ५०   | ७५०       | १५०  | १५०  | १५०  | १५०  | १५०  |               |
| १.७    | डाडां खोल्छे सिम्सार संरक्षण           | वटा   | १      | ५००  | ५००       | ५००  |      |      |      |      |               |
| १.८    | चकरी खोला तटबन्धन                      | कि.मी | २      | ३००  | ६००       | १२०  | १२०  | १२०  | १२०  | १२०  | स्थानीय सरकार |
| १.९    | गल्ली नियन्त्रण                        | वटा   | १०     | ५००  | ५०००      | १००० | १००० | १००० | १००० | १००० |               |
| १.१    | मचान निर्माण                           | वटा   | ३      | ६००  | १८००      | ६००  |      | ६००  |      | ६००  |               |
| १.११   | नर्सरी सहयोग                           | वटा   | १      | २००  | २००       | २००  |      |      |      |      |               |
| १.१२   | वृक्षारोपन                             | हे    | १०     | ५०   | ५००       | १००  | १००  | १००  | १००  | १००  |               |
| २      | सामुदायिक विकास                        |       |        |      |           |      |      |      |      |      |               |
| २.१    | पर्यटकिय स्थल निर्माण                  | वटा   | १      | १००० | १०००      |      | १००० |      |      |      |               |
| २.२    | धार्मिक पर्यटकीय स्थलको कोरीडर निर्माण | वटा   | १      | ५००  | ५००       |      |      | ५००  |      |      |               |
| २.३    | गुप्तेश्वर बाट भाटाका दुग्धेश्वर       | वर्ष  | ५      | ५००  | २५००      | ५००  | ५००  | ५००  | ५००  | ५००  |               |

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|------|------------------------------|-------|-----|------|------|------|------|-----|------|------|--|
|      | मार्ग                        |       |     |      |      |      |      |     |      |      |  |
| २.४  | उ.स.को भवन मर्मत             | वटा   | १   | १००० | १००० |      |      |     | १००० |      |  |
| २.५  | सांस्कृतिक भवन निर्माण       | वटा   | १   | १५०० | १५०० |      |      |     |      | १५०० |  |
| २.६  | बाटो मर्मत                   | कि.मी | ५   | ७५   | ३७५  | ७५   | ७५   | ७५  | ७५   | ७५   |  |
| २.७  | खानेपानी मर्मत सुधार         | वटा   | ८   | १००  | ८००  | १६०  | १६०  | १६० | १६०  | १६०  |  |
| २.८  | बाइसधारा निर्माण             | वटा   | १   | २००० | २००० | १००० | १००० |     |      |      |  |
| २.९  | हात्ती गौडामा हात्तीको सालिक | वटा   | १   | ५००  | ५००  |      |      | २५० | २५०  |      |  |
| २.१० | गैडाधापमा गैडाको सालिक       | वटा   | १   | ५००  | ५००  |      |      | २५० | २५०  |      |  |
| २.११ | सहकारी भवन निर्माण           | वटा   | १   | १००० | १००० |      | ५००  |     | ५००  |      |  |
| २.१२ | हात्ती गौडा चकरी भकरी        | वटा   | १   | १००० | १००० |      |      | ५०० | ५००  |      |  |
| २.१३ | गोगनपानी बाटो निर्माण        | कि.मी | ५   | ३००  | १५०० | ३००  | ३००  | ३०० | ३००  | ३००  |  |
| ३    | आयआर्जन तथा सिप विकास        |       |     |      |      |      |      |     |      |      |  |
| ३.१  | तरकारी खेती तालिम            | पटक   | २   | ५०   | १००  | ५०   |      | ५०  |      |      |  |
| ३.२  | पशुपालन तालिम                | पटक   | २   | ५०   | १००  |      |      | ५०  | ५०   |      |  |
| ३.३  | हाउस वायरिड तालिम            | पटक   | २   | १०   | २०   |      |      | १०  |      | १०   |  |
| ३.४  | प्लम्बीड तालिम               | पटक   | २   | १०   | २०   | १०   |      |     |      | १०   |  |
| ३.५  | मोबाइल रिपेरीड तालिम         |       | २   | ७५   | १५०  |      |      | ७५  | ७५   |      |  |
| ३.६  | कुखुरापालन तालिम             | पटक   | २   | १००  | २००  | १००  |      |     |      | १००  |  |
| ३.७  | फलफुलका विरुवा वितरण         | वटा   | ५०० | ०.५  | २५०  | ५०   | ५०   | ५०  | ५०   | ५०   |  |
| ३.८  | उन्नत जातको बोका वितरण       | वटा   | १६  | ५०   | ८००  | १६०  | १६०  | १६० | १६०  | १६०  |  |
| ३.९  | सिलाई बुनाई तालिम            | पटक   | १   | २००  | २००  |      |      | १०० |      | १००  |  |

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|------|----------------------------------------------|------|---|-----|-----|-----|-----|-----|-----|-----|--|
| ३.१  | नेतृत्व विकास तालिम                          | पटक  | ३ | ७५  | २२५ | ७५  |     | ७५  |     | ७५  |  |
| ३.११ | लेखा तालिम                                   | पटक  | २ | ५०  | १०० | ५०  |     | ५०  |     |     |  |
| ४    | <b>संरक्षण शिक्षा</b>                        |      |   |     |     |     |     |     |     |     |  |
| ४.१  | CBAPU परिचालन                                | वर्ष | ५ | ५०  | २५० | ५०  | ५०  | ५०  | ५०  | ५०  |  |
| ४.२  | Eco-club लाई सहयोग                           | वर्ष | ५ | ५०  | २५० | ५०  | ५०  | ५०  | ५०  | ५०  |  |
| ४.३  | संरक्षण सम्बन्धि निती नियमको अर्न्तकृया      | पटक  | ५ | १०० | ५०० | १०० | १०० | १०० | १०० | १०० |  |
| ४.४  | संरक्षण दिवश आयोजना                          | वर्ष | ५ | १०० | ५०० | १०० | १०० | १०० | १०० | १०० |  |
| ४.५  | अध्ययन अवलोकन भ्रमण                          | पटक  | २ | २०० | ४०० |     | २०० |     |     | २०० |  |
| ४.६  | विद्यालय स्तरीय संरक्षण सम्बन्धि प्रतियोगिता | वर्ष | ५ | १०० | ५०० | १०० | १०० | १०० | १०० | १०० |  |
| ४.७  | मानव वन्यजन्तु द्वन्द्व न्युनीकरण गोष्ठी     | पटक  | ५ | १०० | ५०० | १०० | १०० | १०० | १०० | १०० |  |
| ४.८  | लागु औषधी दुर्ब्यसनी विरुद्ध सचेतना          | पटक  | ५ | ७५  | ३७५ | ७५  | ७५  | ७५  | ७५  | ७५  |  |
| ५    | <b>प्रशासनिक</b>                             |      |   |     |     |     |     |     |     |     |  |
| ५.१  | कार्यालय सहयोगी                              | जना  | ५ | १५० | ७५० | १५० | १५० | १५० | १५० | १५० |  |
| ५.२  | मसलन्द                                       | वर्ष | ५ | ३०  | १५० | ३०  | ३०  | ३०  | ३०  | ३०  |  |
| ५.३  | सञ्चार                                       | वर्ष | ५ | ७५  | ३७५ | ७५  | ७५  | ७५  | ७५  | ७५  |  |
| ५.४  | भ्रमण यातायात                                | पटक  | ५ | ५०  | २५० | ५०  | ५०  | ५०  | ५०  | ५०  |  |
| ५.५  | मिटिडमा खाजा                                 | पटक  | ५ | २५  | १२५ | २५  | २५  | २५  | २५  | २५  |  |
| ५.६  | विजुली, पानी                                 | वर्ष | ५ | ६०  | ३०० | ६०  | ६०  | ६०  | ६०  | ६०  |  |
| ५.७  | प्रीन्टर                                     | वटा  | १ | ४५  | ४५  | ४५  |     |     |     |     |  |

|     |                         |      |   |    |    |      |      |      |      |      |  |
|-----|-------------------------|------|---|----|----|------|------|------|------|------|--|
| ५.८ | पञ्च वर्षिय योजना तयारी | वर्ष | १ | २० | २० |      |      |      | २०   |      |  |
|     | जम्मा                   |      |   |    |    | ७९९२ | ८०६२ | ७८७२ | ८००७ | ७९५७ |  |

पर्सो राष्ट्रिय निकुञ्ज मध्यवर्ती क्षेत्र  
पदम मिलन उपभोक्ता समिति  
रकम रु .००० (हजार)

| सि.नं. | कार्यक्रम                  | इकाई  | परिमाण | रकम  | जम्मा रकम | १   | २   | ३   | ४   | ५   |  |
|--------|----------------------------|-------|--------|------|-----------|-----|-----|-----|-----|-----|--|
| १      | सरक्षण                     |       |        |      |           |     |     |     |     |     |  |
| १.१    | सा.व. नविकरण               | वटा   | ३      | ४०   | १२०       | ४०  |     | ४०  |     | ४०  |  |
| १.२    | वन हेरालु                  | जना   | १५     | ६२   | ९३०       | १८६ | १८६ | १८६ | १८६ | १८६ |  |
| १.३    | सालक संरक्षण प्राविधिक     | वर्ष  | ५      | ६०   | ३००       | ६०  | ६०  | ६०  | ६०  | ६०  |  |
| १.४    | सालक संरक्षण अनुगमन        | वर्ष  | ५      | ६०   | ३००       | ६०  | ६०  | ६०  | ६०  | ६०  |  |
| १.५    | मेसजाली घेरबार             | कि.मी | ३      | ३००  | ९००       | १८० | १८० | १८० | १८० | १८० |  |
| १.६    | सौर्य तारबाट मर्मत         | कि.मी | ५      | २००  | १०००      | २०० | २०० | २०० | २०० | २०० |  |
| १.७    | पानी मुहान संरक्षण         | वटा   | ६      | ५०   | ३००       | ६०  | ६०  | ६०  | ६०  | ६०  |  |
| १.८    | पानी पोखरी निर्माण         | वटा   | ९      | २००  | १८००      | ३६० | ३६० | ३६० | ३६० | ३६० |  |
| १.९    | कबुलियती वन नविकरण         | वटा   | २३     | ४०   | ९२०       | १८४ | १८४ | १८४ | १८४ | १८४ |  |
| १.११   | मेसजाली तारबार             | कि.मी | ३      | ३००  | ९००       | ३०० |     | ३०० |     | ३०० |  |
| १.११   | तटबन्धन                    | कि.मी | २      | १००० | २०००      | ४०० | ४०० | ४०० | ४०० | ४०० |  |
| २      | सामुदायिक विकास            |       |        |      |           |     |     |     |     |     |  |
| २.१    | प्रवेशद्वार (सालक संरक्षण) | वटा   | १      | ५००  | ५००       | ५०० |     |     |     |     |  |

|      |                                   |       |   |      |      |       |      |       |     |       |  |
|------|-----------------------------------|-------|---|------|------|-------|------|-------|-----|-------|--|
| २.२  | धार्मिक पर्यटकीय स्थल निर्माण     | वटा   | १ | १००० | १००० | १०००  |      |       |     |       |  |
| २.३  | धार्मिक वन निर्माण                | वटा   | १ | ५००  | ५००  |       |      |       | ५०० |       |  |
| २.४  | सांस्कृतिक भवन निर्माण            | वटा   | १ | १५०० | १५०० |       |      |       | ७५० | ७५०   |  |
| २.५  | ब्यायाम शाला निर्माण              | वटा   | १ | ७५०  | ७५०  |       |      |       | ३७५ | ३७५   |  |
| २.६  | बाटो निर्माण, मर्मत सुधार         | कि.मी | ५ | ५००  | २५०० | ५००   | ५००  | ५००   | ५०० | ५००   |  |
| २.७  | धार्मिक वनमा खानेपानी             | वटा   | १ | ५००  | ५००  | १००   | १००  | १००   | १०० | १००   |  |
| २.८  | सिचाईको लागि डिप बोरिङ            | वटा   | ३ | ५००  | १५०० | ५००   |      |       | ५०० | ५००   |  |
| २.९  | खानेपानीको over head construction | वटा   | १ | ५००० | ५००० |       | २५०० | २५००  |     |       |  |
| २.१० | पर्यटकीय सुचना केन्द्र            | वटा   | १ | १५०  | १५०  | १५०   |      |       |     |       |  |
| २.११ | पार्क निर्माण                     | वटा   | १ | १५०० | १५०० |       |      |       | ७५० | ७५०   |  |
| ३    | आयआर्जन तथा सिप विकास             |       |   |      |      |       |      |       |     |       |  |
| ३.१  | बेमौसमी तरकारी खेती               | पटक   | २ | ७५   | १५०  |       | ७५   |       | ७५  |       |  |
| ३.२  | पशुपालन तालिम                     | पटक   | ३ | ५०   | १५०  | ५०    |      | ५०    |     | ५०    |  |
| ३.३  | नेतृत्व विकास तालिम               | पटक   | २ | ५०   | १००  |       | ५०   |       | ५०  |       |  |
| ३.४  | लेखा तालिम                        | पटक   | ५ | १००  | ५००  | १००   | १००  | १००   | १०० | १००   |  |
| ३.५  | हाउस वायरिङ तालिम                 | पटक   | ५ | १००  | ५००  | १००   | १००  | १००   | १०० | १००   |  |
| ३.६  | मोबाइल रिपेरीङ तालिम              | पटक   | २ | १२५  | २५०  |       |      | १२५   |     | १२५   |  |
| ३.७  | प्लम्बीङ तालिम                    | पटक   | २ | ५०   | १००  | ५०    |      | ५०    |     |       |  |
| ३.८  | कम्प्युटर तालिम                   | पटक   | २ | ५०   | १००  |       | ५०   |       | ५०  |       |  |
| ३.९  | कार्यालय सञ्चालन तालिम            | पटक   | २ | ५०   | १००  | ३३.३३ |      | ३३.३३ |     | ३३.३३ |  |
| ३.१  | कुखुरापालन तालिम                  | पटक   | ३ | ५०   | १५०  | ५०    |      | ५०    |     | ५०    |  |

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| ३.११ | गलैचा बुन्ने तालिम                           | पटक  | २  | ५०  | १०० |     | ५०  |     | ५०  |     |  |
| ४    | <b>संरक्षण शिक्षा</b>                        |      |    |     |     |     |     |     |     |     |  |
| ४.१  | CBAPU परिचालन                                | पटक  | ५  | ५०  | २५० | ५०  | ५०  | ५०  | ५०  | ५०  |  |
| ४.२  | Eco-club परिचालन                             | पटक  | ४  | ५०  | २०० | ४०  | ४०  | ४०  | ४०  | ४०  |  |
| ४.३  | अध्ययन अवलोकन भ्रमण                          | पटक  | २  | २०० | ४०० |     | २०० |     |     | २०० |  |
| ४.४  | संरक्षण सम्बन्धि निती नियमको अर्न्तकृया      | पटक  | ५  | ५०  | २५० | ५०  | ५०  | ५०  | ५०  | ५०  |  |
| ४.५  | होडिड बोर्ड                                  | वटा  | १० | २०  | २०० | ४०  | ४०  | ४०  | ४०  | ४०  |  |
| ४.६  | विद्यालय स्तरीय संरक्षण सम्बन्धी प्रतियोगिता | पटक  | ५  | १०० | ५०० | १०० | १०० | १०० | १०० | १०० |  |
|      | सडक नाटक                                     | पटक  | ५  | ५०  | २५० | ५०  | ५०  | ५०  | ५०  | ५०  |  |
|      | संरक्षण शिक्षा आयोजना                        | पटक  | ५  | ५०  | २५० | ५०  | ५०  | ५०  | ५०  | ५०  |  |
|      | संरक्षण सम्बन्धी जनचेतना गोष्ठी              | पटक  | ५  | ५०  | २५० | ५०  | ५०  | ५०  | ५०  | ५०  |  |
| ५    | <b>प्रशासनिक</b>                             |      |    |     |     |     |     |     |     |     |  |
| ५.१  | कार्यालय सहयोगी                              | जना  | ५  | १९० | ९५० | १९० | १९० | १९० | १९० | १९० |  |
| ५.२  | मसलन्द                                       | वर्ष | ५  | ६०  | ३०० | ६०  | ६०  | ६०  | ६०  | ६०  |  |
| ५.३  | सञ्चार                                       | वर्ष | ५  | ९०  | ४५० | ९०  | ९०  | ९०  | ९०  | ९०  |  |
| ५.४  | भ्रमण यातायात                                | पटक  | ५  | ७५  | ३७५ | ७५  | ७५  | ७५  | ७५  | ७५  |  |
| ५.५  | मिटिडमा खाजा                                 | पटक  | ५  | ४०  | २०० | ४०  | ४०  | ४०  | ४०  | ४०  |  |
| ५.६  | विजुली, पानी                                 | वर्ष | ५  | ७५  | ३७५ | ७५  | ७५  | ७५  | ७५  | ७५  |  |
| ५.७  | मर्मत सम्भार                                 | वर्ष | ५  | ५०  | २५० | ५०  | ५०  | ५०  | ५०  | ५०  |  |
| ५.८  | पञ्च वर्षिय योजना तयारी                      | वर्ष | १  | ३०  | ३०  |     |     |     |     | ३०  |  |

|  |       |  |  |  |  |      |      |      |      |      |  |
|--|-------|--|--|--|--|------|------|------|------|------|--|
|  | जम्मा |  |  |  |  | ६१७३ | ६४२५ | ६६४८ | ६६०० | ६७०३ |  |
|--|-------|--|--|--|--|------|------|------|------|------|--|

पर्सा राष्ट्रिय निकुञ्ज मध्यवर्ती क्षेत्र  
चुरियामाई उपभोक्ता समिति  
रकम रु .००० (हजार)

| सि.नं. | कार्यक्रम                                   | इकाई  | परिमाण | रकम  | जम्मा रकम | १    | २    | ३    | ४    | ५    |  |
|--------|---------------------------------------------|-------|--------|------|-----------|------|------|------|------|------|--|
| १      | संरक्षण                                     |       |        |      |           |      |      |      |      |      |  |
| १.१    | भु.संरक्षणको लागि तटबन्धन                   | कि.मी | ३      | ४००० | १२०००     | २४०० | २४०० | २४०० | २४०० | २४०० |  |
| १.२    | तारजाली घेरबार                              | कि.मी | ४      | ३००  | १२००      | २४०  | २४०  | २४०  | २४०  | २४०  |  |
| १.३    | सा.व. नविकरण                                | वटा   | ३      | १००  | ३००       | ६०   | ६०   | ६०   | ६०   | ६०   |  |
| १.४    | वन हेरालु                                   | जना   | १५     | १२०  | १८००      | ३६०  | ३६०  | ३६०  | ३६०  | ३६०  |  |
| १.५    | वृक्षारोपण                                  | हे    | ४५     | १००  | ४५००      | ९००  | ९००  | ९००  | ९००  | ९००  |  |
| १.६    | वृक्षारोपनलाई घेरबार                        | कि.मी | ५      | ३००  | १५००      | ३००  | ३००  | ३००  | ३००  | ३००  |  |
| १.७    | ट्रेनिङ अपरेसन                              | पटक   | ५      | ३००  | १५००      | ३००  | ३००  | ३००  | ३००  | ३००  |  |
| १.८    | अग्नी रेखा निर्माण                          | कि.मी | ६      | ५०   | ३००       | ६०   | ६०   | ६०   | ६०   | ६०   |  |
| १.९    | पानी मुहान संरक्षण                          | वटा   | १      | ५०   | ५०        | ५०   |      |      |      |      |  |
| १.११   | बदेलधार्पाँ, उत्तरपानी, नयाँ वस्ती, हरियाली | वर्ष  | ५      | ५०   | २५०       | ५०   | ५०   | ५०   | ५०   | ५०   |  |
| १.११   | औषधीय प्रजातीको संरक्षण, वृक्षारोपण         | हे    | २      | ५०   | १००       | २०   | २०   | २०   | २०   | २०   |  |
| २      | सामुदायिक विकास                             |       |        |      |           |      |      |      |      |      |  |
| २.१    | मचान निर्माण                                | वटा   | ३      | ५००  | १५००      |      |      | ५००  | ५००  | ५००  |  |

|      |                        |       |    |      |      |      |      |      |      |      |  |
|------|------------------------|-------|----|------|------|------|------|------|------|------|--|
| २.२  | सामुदायिक भवन          | वटा   | २  | १००० | २००० |      |      | १००० | १००० |      |  |
| २.३  | गोलघर                  | वटा   | ३  | २००  | ६००  |      |      | ३००  | ३००  |      |  |
| २.४  | समिति भवन मर्मत        | पटक   | १  | १००० | १००० |      |      |      |      | १००० |  |
| २.५  | भुलुङ्गे पुल           | वटा   | १  | ५००० | ५००० | २५०० | २५०० |      |      |      |  |
| २.६  | पर्यटन स्थल निर्माण    | वटा   | १  | १००० | १००० | २००  | २००  | २००  | २००  | २००  |  |
| २.७  | साइकल ट्रयाक निर्माण   | कि.मी | ७  | ५०   | ३५०  | ७०   | ७०   | ७०   | ७०   | ७०   |  |
| ३    | आयआर्जन तथा सिप विकास  |       |    |      |      |      |      |      |      |      |  |
| ३.१  | बेमौसमी तरकारी खेती    | पटक   | २  | ७५   | १५०  |      |      |      | ७५   | ७५   |  |
| ३.२  | पशुपालन तालिम          | पटक   | ३  | ५०   | १५०  | ५०   |      |      | ५०   | ५०   |  |
| ३.३  | हाउस वायरिड तालिम      | पटक   | २  | १००  | २००  |      |      | १००  |      | १००  |  |
| ३.४  | प्लम्बीड तालिम         | पटक   | २  | १००  | २००  |      |      | १००  | १००  |      |  |
| ३.५  | सिलाई बुनाई तालिम      | पटक   | २  | १५०  | ३००  |      |      |      | १५०  | १५०  |  |
| ३.६  | दुना टपरी तालिम        | पटक   | २  | ५०   | १००  |      |      | ५०   |      | ५०   |  |
| ३.७  | मोटर, साइकल मर्मत      | पटक   | ३  | ५०   | १५०  |      |      | ५०   | ५०   | ५०   |  |
| ३.८  | होम स्टे सञ्चालन तालिम | पटक   | ३  | १५०  | ४५०  |      |      | १५०  | १५०  | १५०  |  |
| ३.९  | कुक तालिम              | पटक   | २  | १००  | २००  |      |      |      | १००  | १००  |  |
| ३.१  | नेचर गार्ड तालिम       | पटक   | १  | १००  | १००  |      |      | १००  |      |      |  |
| ३.११ | उन्नत जातको बोका वितरण | वटा   | १५ | ५०   | ७५०  | १५०  | १५०  | १५०  | १५०  | १५०  |  |
| ४    | संरक्षण शिक्षा         |       |    |      |      |      |      |      |      |      |  |
| ४.१  | CBAPU परिचालन          | वर्ष  | ५  | ५०   | २५०  | ५०   | ५०   | ५०   | ५०   | ५०   |  |
| ४.२  | Eco-club परिचालन       | वर्ष  | ५  | ५०   | २५०  | ५०   | ५०   | ५०   | ५०   | ५०   |  |

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|-----|-------------------------------------------------|------|----|-----|------|------|------|------|------|------|--|
| ४.३ | अध्ययन अवलोकन भ्रमण                             | पटक  | २  | ३०० | ६००  |      |      | ३००  |      | ३००  |  |
| ४.४ | संरक्षण दिवश आयोजना                             | वर्ष | ५  | ५०  | २५०  | ५०   | ५०   | ५०   | ५०   | ५०   |  |
| ४.५ | विद्यालय स्तरीय संरक्षण सम्बन्धी प्रतियोगिता    | पटक  | ५  | ५०  | २५०  | ५०   | ५०   | ५०   | ५०   | ५०   |  |
| ४.६ | संरक्षण सम्बन्धी निती नियमको अर्न्तकृया, गोष्ठी | पटक  | ५  | ५०  | २५०  | ५०   | ५०   | ५०   | ५०   | ५०   |  |
| ४.७ | मानव वन्यजन्तु द्वन्दको अर्न्तकृया              | पटक  | ५  | ५०  | २५०  | ५०   | ५०   | ५०   | ५०   | ५०   |  |
| ४.८ | संरक्षण सम्बन्धी टिसर्ट निर्माण                 | पटक  | ५  | ५०  | २५०  | ५०   | ५०   | ५०   | ५०   | ५०   |  |
| ५   | <b>प्रशासनिक</b>                                |      |    |     |      |      |      |      |      |      |  |
| ५.१ | कार्यालय सहयोगी                                 | जना  | ५  | २०० | १००० | २००  | २००  | २००  | २००  | २००  |  |
| ५.२ | मसलन्द                                          | वर्ष | ५  | ३०  | १५०  | ३०   | ३०   | ३०   | ३०   | ३०   |  |
| ५.३ | विजुली, पानी                                    | वर्ष | ५  | १०  | ५०   | १०   | १०   | १०   | १०   | १०   |  |
| ५.४ | सञ्चार                                          | वर्ष | ५  | ५   | २५   | ५    | ५    | ५    | ५    | ५    |  |
| ५.५ | मिटिडमा खाजा                                    | पटक  | ५  | १५  | ७५   | १५   | १५   | १५   | १५   | १५   |  |
| ५.६ | भ्रमण यातायात                                   | पटक  | ५  | ५०  | २५०  | ५०   | ५०   | ५०   | ५०   | ५०   |  |
| ५.७ | डिजिटल क्यामेरा                                 | वटा  | १  | ५०  | ५०   | १०   | १०   | १०   | १०   | १०   |  |
| ५.८ | आइडी कार्ड वितरण/चोरी शिकारी                    | वटा  | १५ | ५   | ७५   | १५   | १५   | १५   | १५   | १५   |  |
| ५.९ | पञ्च वर्षिय योजना तयारी                         | वर्ष | १  | २५  | २५   |      |      |      |      | २५   |  |
|     | <b>जम्मा</b>                                    |      |    |     |      | ८३९५ | ८२९५ | ८४४५ | ८२७० | ८३४५ |  |

पर्सो राष्ट्रिय निकुञ्ज मध्यवर्ती क्षेत्र  
पञ्चमुखी उपभोक्ता समिति  
रकम रु .००० (हजार)

| सि.नं. | कार्यक्रम                   | इकाई  | परिमाण | रकम  | जम्मा रकम | १    | २    | ३   | ४   | ५   |  |
|--------|-----------------------------|-------|--------|------|-----------|------|------|-----|-----|-----|--|
| १      | संरक्षण                     |       |        |      |           |      |      |     |     |     |  |
| १.१    | सा.व. नविकरण                | पटक   | ३      | ५०   | १५०       | ३०   | ३०   | ३०  | ३०  | ३०  |  |
| १.२    | वन हेरालु                   | जना   | १५     | ६०   | ९००       | १८०  | १८०  | १८० | १८० | १८० |  |
| १.३    | मेसजाली घेरबार              | कि.मी | ३      | ४००  | १२००      | २४०  | २४०  | २४० | २४० | २४० |  |
| १.४    | पानी पोखरी                  | वटा   | २      | ५००  | १०००      | २००  | २००  | २०० | २०० | २०० |  |
| १.५    | मचान निर्माण                | वटा   | ३      | ७००  | २१००      | ४२०  | ४२०  | ४२० | ४२० | ४२० |  |
| १.६    | सा.व.मा जोड्ने वनपथ निर्माण | कि.मी | ५      | ५००  | २५००      | ५००  | ५००  | ५०० | ५०० | ५०० |  |
| १.७    | तटबन्धन                     | कि.मी | १      | १००  | १००       | ५०   | ५०   |     |     |     |  |
| १.८    | सोलार फेन्स मर्मत सम्भार    | कि.मी | ३      | १००  | ३००       | १००  | १००  |     |     | १०० |  |
| १.९    | कक्रिट बाल निर्माण          | कि.मी | २      | ८००  | १६००      | ३२०  | ३२०  | ३२० | ३२० | ३२० |  |
| १.१    | मिचाहा प्रजाति नियन्त्रण    | हे    | ५      | ५०   | २५०       | ५०   | ५०   | ५०  | ५०  | ५०  |  |
| १.११   | घांसे मैदान निर्माण         | हे    | ६      | ५०   | ३००       | ६०   | ६०   | ६०  | ६०  | ६०  |  |
| १.१२   | वृक्षारोपण                  | हे    | १५     | ५०   | ७५०       | १५०  | १५०  | १५० | १५० | १५० |  |
| २      | सामुदायिक विकास             |       |        |      |           |      |      |     |     |     |  |
| २.१    | उ.स.भवन पुन निर्माण         | वटा   | १      | १५०० | १५००      | ७५०  | ७५०  |     |     |     |  |
| २.२    | गोलघर निर्माण               | वटा   | ५      | ३००  | १५००      |      | ५००  | ५०० | ५०० |     |  |
| २.३    | सास्कृतिक भवन               | वटा   | १      | २००० | २०००      | १००० | १००० |     |     |     |  |
| २.४    | सिचाई कुलो मर्मत            | कि.मी | ५      | १००  | ५००       | १००  | १००  | १०० | १०० | १०० |  |

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|------|-------------------------|-------|-----|-------|-------|------|-------|-------|------|-------|--|
| २.५  | सडक ग्राभेलिड           | कि.मी | ६   | ३००   | १८००  | ३६०  | ३६०   | ३६०   | ३६०  | ३६०   |  |
| २.६  | खानेपानी धारा           | ठाऊं  | १३  | २५०   | ३२५०  | ६५०  | ६५०   | ६५०   | ६५०  | ६५०   |  |
| २.७  | थारु संग्राहलय स्थापना  | वटा   | १   | २५००  | २५००  | १२५० | १२५०  |       |      |       |  |
| २.८  | भुलुङ्गे पुल निर्माण    | वटा   | १   | १०००० | १०००० |      |       | ३३३३  | ३३३३ | ३३३३  |  |
| ३    | आयआर्जन तथा सिप विकास   |       |     |       |       |      |       |       |      |       |  |
| ३.१  | तरकारी खेती तालिम       | पटक   | २   | ५०    | १००   | ५०   | ५०    |       |      |       |  |
| ३.२  | पशुपालन तालिम           | पटक   | ३   | ५०    | १५०   | ५०   |       | ५०    |      | ५०    |  |
| ३.३  | कुखुरापालन तालिम        | पटक   | २   | ३०    | ६०    |      | ३०    |       | ३०   |       |  |
| ३.४  | हाउस वायरिड तालिम       | पटक   | ३   | ५०    | १५०   | ५०   |       | ५०    |      | ५०    |  |
| ३.५  | प्लम्बीड तालिम          | पटक   | २   | ५०    | १००   | ५०   |       |       | ५०   |       |  |
| ३.६  | सिलाई कटाई तालिम        | पटक   | १   | ५०    | ५०    | ५०   |       |       |      |       |  |
| ३.७  | मोबाईल मर्मत तालिम      | पटक   | २   | ७५    | १५०   | ७५   | ७५    |       |      |       |  |
| ३.८  | मोटर/स्कुटर मर्मत तालिम | पटक   | ३   | ५०    | १५०   | ५०   | ५०    |       |      | ५०    |  |
| ३.९  | मौरी पालन तालिम         | पटक   | १   | १००   | १००   |      | ३३.३३ | ३३.३३ |      | ३३.३३ |  |
| ३.१  | सुधारिएको चुलो          | वटा   | १०० | १००   | १०००० | २००० | २०००  | २०००  | २००० | २०००  |  |
| ३.११ | मौरीको घर वितरण         | वटा   | १०० | १५०   | १५००० | ३००० | ३०००  | ३०००  | ३००० | ३०००  |  |
| ३.१२ | सुरक्षित बाखा गोठ       | वटा   | १५० | ७५    | ११२५० | २२५० | २२५०  | २२५०  | २२५० | २२५०  |  |
| ३.१३ | नेतृत्व विकास तालिम     | पटक   | २   | ५०    | १००   |      | ५०    |       | ५०   |       |  |
| ३.१४ | लेखा तालिम              | पटक   | ३   | ७५    | २२५   | ७५   |       | ७५    |      | ७५    |  |
| ३.१५ | डढेलो नियन्त्रण तालिम   | पटक   | २   | ५०    | १००   |      | ५०    |       |      | ५०    |  |
| ३.१६ | ढकिया बनाउने तालिम      | पटक   | १   | ५०    | ५०    | ५०   |       |       |      |       |  |

|      |                                                 |      |    |     |     |     |     |     |     |     |  |
|------|-------------------------------------------------|------|----|-----|-----|-----|-----|-----|-----|-----|--|
| ३.१७ | अगरबत्ती बनाउने तालिम                           | पटक  | १  | ५०  | ५०  |     |     |     |     | ५०  |  |
| ३.१८ | सर्फ/साबुन बनाउने तालिम                         | पटक  | २  | ५०  | १०० | ५०  | ५०  |     |     |     |  |
| ३.१९ | उन्नत जातको बोका वितरण                          | वटा  | १२ | ४०  | ४८० | ९६  | ९६  | ९६  | ९६  | ९६  |  |
| ३.२० | बगुरपालन तालिम                                  | पटक  | २  | ५०  | १०० |     | ५०  |     |     | ५०  |  |
| ४    | <b>संरक्षण शिक्षा</b>                           |      |    |     |     |     |     |     |     |     |  |
| ४.१  | CBAPU परिचालन                                   | पटक  | ५  | ५०  | २५० | ५०  | ५०  | ५०  | ५०  | ५०  |  |
| ४.२  | Eco-club परिचालन                                | पटक  | ५  | ५०  | २५० | ५०  | ५०  | ५०  | ५०  | ५०  |  |
| ४.३  | विद्यालय स्तरीय संरक्षण सम्बन्धी प्रतियोगिता    | पटक  | ५  | ५०  | २५० | ५०  | ५०  | ५०  | ५०  | ५०  |  |
| ४.४  | संरक्षण सम्बन्धी निती नियमको अर्न्तकृया, गोष्ठी | पटक  | ५  | ५०  | २५० | ५०  | ५०  | ५०  | ५०  | ५०  |  |
| ४.५  | मानव वन्यजन्तु द्वन्दको अर्न्तकृया              | पटक  | ५  | ५०  | २५० | ५०  | ५०  | ५०  | ५०  | ५०  |  |
| ४.६  | संरक्षण सम्बन्धी दिवश समारोह                    | वर्ष | ५  | ५०  | २५० | ५०  | ५०  | ५०  | ५०  | ५०  |  |
| ४.७  | अध्ययन अवलोकन भ्रमण                             | पटक  | २  | २०० | ४०० |     | २०० |     | २०० |     |  |
| ४.८  | सडक नाटक                                        | पटक  | ५  | ५०  | २५० | ५०  | ५०  | ५०  | ५०  | ५०  |  |
| ५    | <b>प्रशासनिक</b>                                |      |    |     |     |     |     |     |     |     |  |
| ५.१  | कार्यालय सहयोगी                                 | जना  | ५  | १९५ | ९७५ | १९५ | १९५ | १९५ | १९५ | १९५ |  |
| ५.२  | मसलन्द                                          | वर्ष | ५  | ३०  | १५० | ३०  | ३०  | ३०  | ३०  | ३०  |  |
| ५.३  | सञ्चार                                          | वर्ष | ५  | ५   | २५  | ५   | ५   | ५   | ५   | ५   |  |
| ५.४  | विजुली पानी                                     | वर्ष | ५  | १०  | ५०  | १०  | १०  | १०  | १०  | १०  |  |
| ५.५  | भ्रमण यातायात                                   | पटक  | ५  | ५०  | २५० | ५०  | ५०  | ५०  | ५०  | ५०  |  |
| ५.६  | मिटिडमा खाजा                                    | पटक  | ५  | १५  | ७५  | १५  | १५  | १५  | १५  | १५  |  |

|     |                         |      |   |     |     |       |       |       |       |       |  |
|-----|-------------------------|------|---|-----|-----|-------|-------|-------|-------|-------|--|
| ५.७ | कम्प्युटर               | वटा  | १ | १०० | १०० |       |       |       |       | १००   |  |
| ५.८ | प्रीन्टर                | वटा  | १ | ७५  | ७५  |       |       |       |       | ७५    |  |
| ५.९ | पञ्च वर्षिय योजना तयारी | वर्ष | १ | २५  | २५  |       |       |       |       | २५    |  |
|     | जम्मा                   |      |   |     |     | १४९६१ | १५५४९ | १५३०३ | १५४२४ | १५३०३ |  |

पर्सो राष्ट्रिय निकुञ्ज मध्यवर्ती क्षेत्र  
सुनाखरी उपभोक्ता समिति  
रकम रु .००० (हजार)

| सि.नं. | कार्यक्रम                | इकाई  | परिमाणु | रकम  | जम्मा रकम | १    | २    | ३    | ४    | ५    |
|--------|--------------------------|-------|---------|------|-----------|------|------|------|------|------|
| १      | संरक्षण                  |       |         |      |           |      |      |      |      |      |
| १.१    | सा.व. नविकरण             | पटक   | ८       | ४०   | ३२०       | ६४   | ६४   | ६४   | ६४   | ६४   |
| १.२    | वन हेरालु                | जना   | ४०      | ३६   | १४४०      | २८८  | २८८  | २८८  | २८८  | २८८  |
| १.३    | सोलार फेन्स मर्मत        | कि.मी | ५       | २००  | १०००      | २००  | २००  | २००  | २००  | २००  |
| १.४    | कंक्रीट वाल              | कि.मी | ५       | ४००० | २००००     | ४००० | ४००० | ४००० | ४००० | ४००० |
| १.५    | तटबन्धन                  | कि.मी | १       | ८००  | ८००       | १६०  | १६०  | १६०  | १६०  | १६०  |
| १.६    | वनपथ निर्माण             | कि.मी | ८       | ३००  | २४००      | ४८०  | ४८०  | ४८०  | ४८०  | ४८०  |
| १.७    | वनपथ मर्मत सुधार         | कि.मी | १६      | ५०   | ८००       | १६०  | १६०  | १६०  | १६०  | १६०  |
| १.८    | पानी पोखरी निर्माण       | वटा   | ८       | ३००  | २४००      | ४८०  | ४८०  | ४८०  | ४८०  | ४८०  |
| १.९    | मिचाहा प्रजाति नियन्त्रण | हे    | ८       | ७५   | ६००       | १२०  | १२०  | १२०  | १२०  | १२०  |
| १.१    | भाडी सफाई गरी वृक्षारोपन | हे    | १०      | ५०   | ५००       | १००  | १००  | १००  | १००  | १००  |

|      |                                       |       |    |      |      |       |      |       |      |       |
|------|---------------------------------------|-------|----|------|------|-------|------|-------|------|-------|
| १.११ | खहरे नियन्त्रणको लागि वृक्षारोपन      | हे    | १० | ५०   | ५००  | १००   | १००  | १००   | १००  | १००   |
| २    | <b>सामुदायिक विकास</b>                |       |    |      |      |       |      |       |      |       |
| २.१  | मचान निर्माण                          | वटा   | ५  | ७००  | ३५०० | ७००   | ७००  | ७००   | ७००  | ७००   |
| २.२  | घोडेमसान सिचाई कुलो मर्मत तथा निर्माण | कि.मी | १८ | २००  | ३६०० | ७२०   | ७२०  | ७२०   | ७२०  | ७२०   |
| २.३  | सडक मर्मत सम्भार                      | कि.मी | ५  | १५०  | ७५०  | १५०   | १५०  | १५०   | १५०  | १५०   |
| २.४  | कलभर्ट निर्माण                        | वटा   | १० | ५००  | ५००० | १०००  | १००० | १०००  | १००० | १०००  |
| २.५  | उ.स.को भवन निर्माण                    | वटा   | १  | २००० | २००० | १०००  | १००० |       |      |       |
| २.६  | ट्रि हाउस निर्माण                     | वटा   | ३  | ५००  | १५०० | ५००   |      | ५००   | ५००  |       |
| २.७  | क्यानोपी पुल निर्माण                  | वटा   | १  | ५००० | ५००० |       |      | १६६७  | १६६७ | १६६७  |
| ३    | <b>आयआर्जन तथा सिप विकास</b>          |       |    |      |      |       |      |       |      |       |
| ३.१  | तरकारी खेती तालिम                     | पटक   | २  | ५०   | १००  | २०    |      |       | २०   |       |
| ३.२  | पशुपालन तालिम                         | पटक   | ३  | ५०   | १५०  | ५०    |      | ५०    |      | ५०    |
| ३.३  | हाउस वायरिड तालिम                     | पटक   | २  | ५०   | १००  |       | ५०   |       | ५०   |       |
| ३.४  | मोबाईल मर्मत तालिम                    | पटक   | १  | ७५   | ७५   |       |      | ७५    |      |       |
| ३.५  | कम्प्युटर तालिम                       | पटक   | १  | ५०   | ५०   | १६.६७ |      | १६.६७ |      | १६.६७ |
| ३.६  | प्लम्बीड तालिम                        | पटक   | २  | ५०   | १००  | ५०    | ५०   |       |      |       |
| ३.७  | मोटर/स्कुटर बनाउने तालिम              | पटक   | ३  | ५०   | १५०  | ५०    |      | ५०    |      | ५०    |
| ३.८  | नेतृत्व विकास तालिम                   | पटक   | २  | ५०   | १००  |       | ५०   |       | ५०   |       |
| ३.९  | होम स्टे सञ्चालन तालिम                | पटक   | ३  | ५०   | १५०  | ५०    | ५०   |       |      | ५०    |
| ३.१  | कुक तालिम                             | पटक   | २  | १००  | २००  |       | १००  |       | १००  |       |

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|------|----------------------------------------------|------|-----|-----|------|------|------|------|------|------|
| ३.११ | अतिथी सत्कार व्यवस्थापन तालिम                | पटक  | २   | ३०  | ६०   | ३०   |      |      |      | ३०   |
| ३.१२ | सा.व. व्यवस्थापन तालिम                       | पटक  | ३   | ५०  | १५०  | ३०   | ३०   | ३०   | ३०   | ३०   |
| ३.१३ | सिलाई बुनाई तालिम                            | पटक  | ३   | १०० | ३००  | १००  | १००  |      |      | १००  |
| ३.१४ | ब्युटी पार्लर तालिम                          | पटक  | १   | ५०  | ५०   | ५०   |      |      |      |      |
| ३.१५ | मौरी पालन तालिम                              | पटक  | ३   | १०० | ३००  | १००  | १००  |      |      | १००  |
| ३.१६ | मौरीघर वितरण                                 | वटा  | ५०  | १०० | ५००० | १००० | १००० | १००० | १००० | १००० |
| ३.१७ | वाल पेन्टिङ तालिम                            | पटक  | १   | ५०  | ५०   | ५०   |      |      |      |      |
| ३.१८ | च्याउ खेती तालिम                             | पटक  | १   | ५०  | ५०   | ५०   |      |      |      |      |
| ३.१९ | फलफुल विरुवा वितरण                           | वटा  | ५०० | ०.५ | २५०  | ५०   | ५०   | ५०   | ५०   | ५०   |
| ३.२  | सुरक्षित बाख्रा खोर निर्माण                  | वटा  | १०० | ५०  | ५००० | १००० | १००० | १००० | १००० | १००० |
| ३.२१ | गरिब निमुखालाई गोठ सुधार सहयोग               | वटा  | १०० | २०  | २००० | ४००  | ४००  | ४००  | ४००  | ४००  |
| ३.२२ | उन्नत जातको बोका वितरण                       | वटा  | १६  | ५०  | ८००  | १६०  | १६०  | १६०  | १६०  | १६०  |
| ४    | <b>संरक्षण शिक्षा</b>                        |      |     |     |      |      |      |      |      |      |
| ४.१  | CBAPU परिचालन                                | वर्ष | ५   | ५०  | २५०  | ५०   | ५०   | ५०   | ५०   | ५०   |
| ४.२  | Eco-club परिचालन                             | वर्ष | ५   | ५०  | २५०  | ५०   | ५०   | ५०   | ५०   | ५०   |
| ४.३  | विद्यालय स्तरीय संरक्षण सम्बन्धी प्रतियोगिता | पटक  | ५   | ५०  | २५०  | ५०   | ५०   | ५०   | ५०   | ५०   |
| ४.४  | गरिब विद्यार्थीलाई छात्रवृद्धि प्रदान        | वर्ष | ५   | ५०  | २५०  | ५०   | ५०   | ५०   | ५०   | ५०   |
| ४.५  | अध्ययन अवलोकन भ्रमण                          | पटक  | २   | २०० | ४००  | २००  | २००  |      |      |      |
| ४.६  | संरक्षण सम्बन्धी निती नियमको अर्न्तकृया      | पटक  | ५   | ५०  | २५०  | ५०   | ५०   | ५०   | ५०   | ५०   |

|      |                                          |      |   |     |     |          |       |       |       |       |
|------|------------------------------------------|------|---|-----|-----|----------|-------|-------|-------|-------|
| ४.७  | मानव वन्यजन्तु द्वन्द्व न्युनीकरण गोष्ठी | पटक  | ५ | ५०  | २५० | ५०       | ५०    | ५०    | ५०    | ५०    |
| ४.८  | संरक्षण दिवश आयोजना                      | वर्ष | ५ | ५०  | २५० | ५०       | ५०    | ५०    | ५०    | ५०    |
| ५    | <b>प्रशासनिक</b>                         |      |   |     |     |          |       |       |       |       |
| ५.१  | कार्यालय सहयोगी                          | जना  | ५ | १९५ | ९७५ | १९५      | १९५   | १९५   | १९५   | १९५   |
| ५.२  | मसलन्द                                   | वर्ष | ५ | ३०  | १५० | ३०       | ३०    | ३०    | ३०    | ३०    |
| ५.३  | सञ्चार                                   | वर्ष | ५ | ५   | २५  | ५        | ५     | ५     | ५     | ५     |
| ५.४  | भ्रमण यातायात                            | पटक  | ५ | ५०  | २५० | ५०       | ५०    | ५०    | ५०    | ५०    |
| ५.५  | मिटिडमा खाजा                             | पटक  | ५ | १५  | ७५  | १५       | १५    | १५    | १५    | १५    |
| ५.६  | कम्प्युटर                                | वटा  | २ | १०० | २०० | ४०       | ४०    | ४०    | ४०    | ४०    |
| ५.७  | प्रीन्टर                                 | वटा  | १ | ५०  | ५०  |          | ५०    |       |       |       |
| ५.८  | डिजिटल क्यामेरा                          | वटा  | १ | ५०  | ५०  |          | ५०    |       |       |       |
| ५.९  | बाइनाकुलर                                | वटा  | ३ | ५०  | १५० |          | १५०   |       |       |       |
| ५.१० | फर्निचर                                  | पटक  | २ | १५० | ३०० |          | १५०   |       |       | १५०   |
| ५.११ | पञ्च वर्षिय योजना तयारी                  | वर्ष | १ | ५०  | ५०  |          |       |       |       | ५०    |
|      | <b>जम्मा</b>                             |      |   |     |     | १४३६३.६७ | १४१४७ | १४४०५ | १४४३४ | १४३१० |

पर्सा राष्ट्रिय निकुञ्ज मध्यवर्ती क्षेत्र  
कुसुम वाटिका उपभोक्ता समिति  
रकम रु .००० (हजार)

| सि.नं. | कार्यक्रम                                       | इकाई  | परिमाण | रकम | जम्मा रकम | १   | २   | ३   | ४   | ५   |
|--------|-------------------------------------------------|-------|--------|-----|-----------|-----|-----|-----|-----|-----|
| १      | संरक्षण                                         |       |        |     |           |     |     |     |     |     |
| १.१    | प्रस्तावित सा.व. दर्ता                          | वटा   | ४      | ४०  | १६०       | ३२  | ३२  | ३२  | ३२  | ३२  |
| १.२    | वन हेरालु                                       | जना   | २०     | १२० | २४००      | ४८० | ४८० | ४८० | ४८० | ४८० |
| १.३    | बाढि नियन्त्रणको लागि बाँस संचय                 | हे    | ५      | ५०  | २५०       | ५०  | ५०  | ५०  | ५०  | ५०  |
| १.४    | तटबन्धन                                         | कि.मी | ४      | ३०० | १२००      | २४० | २४० | २४० | २४० | २४० |
| १.५    | सौर्य फेन्स मर्मत सम्भार                        | कि.मी | ७.५    | १०० | ७५०       | १५० | १५० | १५० | १५० | १५० |
| १.६    | मेसजाली तारबार                                  | कि.मी | ७.५    | ४०० | ३०००      | ६०० | ६०० | ६०० | ६०० | ६०० |
| १.७    | सानो पानी पोखरी                                 | वटा   | ४      | ३०० | १२००      | २४० | २४० | २४० | २४० | २४० |
| १.८    | अतिक्रमण नियन्त्रण गर्न सा.व.मा सिमाङ्कन घेरबार | कि.मी | ५      | ५०० | २५००      | ५०० | ५०० | ५०० | ५०० | ५०० |
| १.९    | वनपथ निर्माण                                    | कि.मी | १०     | १०० | १०००      | २०० | २०० | २०० | २०० | २०० |
| २      | सामुदायिक विकास                                 |       |        |     |           |     |     |     |     |     |
| २.१    | मचान                                            | वटा   | ४      | ८०० | ३२००      | ६४० | ६४० | ६४० | ६४० | ६४० |
| २.२    | सिचाई कुलो निर्माण                              | कि.मी | ५      | ५०० | २५००      | ५०० | ५०० | ५०० | ५०० | ५०० |
| २.३    | सडक ग्राभेलिङ                                   | कि.मी | २      | २०० | ४००       | ८०  | ८०  | ८०  | ८०  | ८०  |
| २.४    | खानेपानी मर्मत                                  | वटा   | ५      | २०० | १०००      | २०० | २०० | २०० | २०० | २०० |
| २.५    | सार्वजनिक जग्गामा पोखरी निर्माण                 | हे    | २      | ५०० | १०००      | २०० | २०० | २०० | २०० | २०० |

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|------|--------------------------|-----|-----|------|------|-----|-----|------|------|-----|
| २.६  | गोलघर                    | वटा | ५   | ३००  | १५०० | ३०० | ३०० | ३००  | ३००  | ३०० |
| २.७  | सांस्कृतिक भवन           | वटा | १   | १५०० | १५०० | ७५० | ७५० |      |      |     |
| २.८  | उ.स. भवन पुन निर्माण     | वटा | १   | २००० | २००० |     |     | १००० | १००० |     |
| २.९  | जङ्गली हात्तीको सालिक    | वटा | १   | ७००  | ७००  |     |     |      |      | ७०० |
| २.१० | प्रवेशद्वार निर्माण      | वटा | १   | ५००  | ५००  | २५० | २५० |      |      |     |
| ३    | आयआर्जन तथा सिप विकास    |     |     |      |      |     |     |      |      |     |
| ३.१  | तरकारी खेती तालिम        | पटक | १   | ५०   | ५०   | १०  | १०  | १०   | १०   | १०  |
| ३.२  | पशुपालन तालिम            | पटक | २   | ५०   | १००  | २०  | २०  | २०   | २०   | २०  |
| ३.३  | सुरक्षित बाखा खोर        | वटा | १२५ | ३५   | ४३७५ | ८७५ | ८७५ | ८७५  | ८७५  | ८७५ |
| ३.४  | सुरक्षित कुखुरा खोर      | वटा | १०० | १५   | १५०० | ३०० | ३०० | ३००  | ३००  | ३०० |
| ३.५  | हाउस वायरिङ तालिम        | पटक | १   | ५०   | ५०   | ५०  |     |      |      |     |
| ३.६  | मौरी पालन तालिम          | पटक | १   | १००  | १००  |     | १०० |      |      |     |
| ३.७  | प्लम्बीङ तालिम           | पटक | १   | ५०   | ५०   |     |     | ५०   |      |     |
| ३.८  | मोबाईल मर्मत तालिम       | पटक | १   | ५०   | ५०   |     |     |      | २५   | २५  |
| ३.९  | मोटर, साइकल मर्मत तालिम  | पटक | १   | ५०   | ५०   | ५०  |     |      |      |     |
| ३.१  | ब्युटी पार्लर तालिम      | पटक | १   | ५०   | ५०   |     | ५०  |      |      |     |
| ३.११ | नेतृत्व विकास तालिम      | पटक | १   | ५०   | ५०   | २५  |     | २५   |      |     |
| ३.१२ | लेखा तालिम               | पटक | २   | ७५   | १५०  |     | ७५  |      | ७५   |     |
| ३.१३ | उदघोषण तालिम             | पटक | १   | ५०   | ५०   |     |     |      |      | ५०  |
| ३.१४ | लघु उद्यम बजारीकरण तालिम | पटक | २   | १००  | २००  | १०० |     |      | १००  |     |
| ३.१५ | कुखुरापालन तालिम         | पटक | ३   | ५०   | १५०  |     | ५०  |      | ५०   | ५०  |

|      |                                          |      |    |     |      |      |      |      |      |      |
|------|------------------------------------------|------|----|-----|------|------|------|------|------|------|
| ३.१६ | बगुनपालन तालिम                           | पटक  | १  | ५०  | ५०   | ५०   |      |      |      |      |
| ३.१७ | होम स्टे सञ्चालन तालिम                   | पटक  | १  | ५०  | १००  |      | ५०   |      | ५०   |      |
| ३.१८ | होम स्टे सहयोग                           | वटा  | १० | ५०० | ५००० | १००० | १००० | १००० | १००० | १००० |
| ३.१९ | कुक तालिम                                | पटक  | ५  | १०० | ५००  | १००  | १००  | १००  | १००  | १००  |
| ३.२० | समुह सञ्चालन तालिम                       | पटक  | १  | १०० | १००  | २०   | २०   | २०   | २०   | २०   |
| ४    | <b>संरक्षण शिक्षा</b>                    |      |    |     |      |      |      |      |      |      |
| ४.१  | CBAPU परिचालन                            | पटक  | ५  | ५०  | २५०  | ५०   | ५०   | ५०   | ५०   | ५०   |
| ४.२  | Eco-club सहयोग                           | पटक  | ५  | ५०  | २५०  | ५०   | ५०   | ५०   | ५०   | ५०   |
| ४.३  | स्कूल शिक्षा कार्यक्रम                   | पटक  | ५  | ५०  | २५०  | ५०   | ५०   | ५०   | ५०   | ५०   |
| ४.४  | लागु औषध दुर्व्यसनी नियन्त्रण तालिम      | पटक  | २  | ५०  | १००  |      | ५०   |      |      | ५०   |
| ४.५  | गरिब विद्यार्थीलाई छात्रवृद्धि प्रदान    | वर्ष | ५  | ५०  | २५०  | ५०   | ५०   | ५०   | ५०   | ५०   |
| ४.६  | अध्ययन अवलोकन भ्रमण                      | पटक  | २  | २०० | ४००  |      |      | २००  |      | २००  |
| ४.७  | संरक्षण सम्बन्धी निती नियमको अर्न्तकृया  | पटक  | ५  | ५०  | २५०  | ५०   | ५०   | ५०   | ५०   | ५०   |
| ४.८  | मानव वन्यजन्तु द्वन्द्व न्युनीकरण गोष्ठी | पटक  | ५  | ५०  | २५०  | ५०   | ५०   | ५०   | ५०   | ५०   |
| ४.९  | होडिड बोर्ड                              | वटा  | १५ | १५  | २२५  | ४५   | ४५   | ४५   | ४५   | ४५   |
| ५    | <b>प्रशासनिक</b>                         |      |    |     |      |      |      |      |      |      |
| ५.१  | कार्यालय सहयोगी                          | जना  | ५  | १३० | ६५०  | १३०  | १३०  | १३०  | १३०  | १३०  |
| ५.२  | मसलन्द                                   | वर्ष | ५  | ५०  | २५०  | ५०   | ५०   | ५०   | ५०   | ५०   |
| ५.३  | सञ्चार                                   | वर्ष | ५  | २५  | १२५  | २५   | २५   | २५   | २५   | २५   |
| ५.४  | विजुली पानी                              | वर्ष | ५  | १०  | ५०   | १०   | १०   | १०   | १०   | १०   |

|      |                         |      |   |    |     |             |             |             |             |             |
|------|-------------------------|------|---|----|-----|-------------|-------------|-------------|-------------|-------------|
| ५.५  | भ्रमण यातायात           | पटक  | ५ | ५० | २५० | ५०          | ५०          | ५०          | ५०          | ५०          |
| ५.६  | मिटिडमा खाजा            | पटक  | ५ | १५ | ७५  | १५          | १५          | १५          | १५          | १५          |
| ५.७  | फर्निचर                 | वर्ष | ५ | २५ | १२५ | २५          | २५          | २५          | २५          | २५          |
| ५.८  | कम्प्युटर               | वटा  | १ | ५० | ५०  | १०          | १०          | १०          | १०          | १०          |
| ५.९  | प्रीन्टर                | वटा  | १ | २० | २०  | ४           | ४           | ४           | ४           | ४           |
| ५.१० | डिजिटल क्यामेरा         | वटा  | १ | ८० | ८०  | १६          | १६          | १६          | १६          | १६          |
| ५.११ | पञ्च वर्षिय योजना तयारी | वर्ष | १ | १५ | १५  |             |             |             |             | १५          |
|      | <b>जम्मा</b>            |      |   |    |     | <b>८६९२</b> | <b>८७९२</b> | <b>८६९२</b> | <b>८७९७</b> | <b>८५०७</b> |

पर्सा राष्ट्रिय निकुञ्ज मध्यवर्ती क्षेत्र  
निर्मलवस्ती उपभोक्ता समिति  
रकम रु .००० (हजार)

| सि.नं. | कार्यक्रम                           | इकाई  | परिमाण | रकम  | जम्मा रकम | १    | २    | ३    | ४    | ५    |               |
|--------|-------------------------------------|-------|--------|------|-----------|------|------|------|------|------|---------------|
| १      | संरक्षण                             |       |        |      |           |      |      |      |      |      |               |
| १.१    | सा.व. दर्ता                         | वटा   | १      | ५०   | ५०        | १०   | १०   | १०   | १०   | १०   |               |
| १.२    | धार्मिक वन नविकरण                   | वटा   | १      | ५०   | ५०        | १०   | १०   | १०   | १०   | १०   |               |
| १.३    | तटबन्धन                             | कि.मी | २      | ३००  | ६००       | १२०  | १२०  | १२०  | १२०  | १२०  | स्थानीय सरकार |
| १.४    | मेसजाली घेरबार                      | कि.मी | ३      | १००० | ३०००      | ६००  | ६००  | ६००  | ६००  | ६००  |               |
| १.५    | नेटजाली तारबार                      | कि.मी | ५      | १५०  | ७५०       | १५०  | १५०  | १५०  | १५०  | १५०  |               |
| १.६    | प्रस्तावित सा.व.मा वनपथ निर्माण     | कि.मी | २      | ५०   | १००       | २०   | २०   | २०   | २०   | २०   |               |
| १.७    | तारबार मर्मत                        | कि.मी | ३      | ७५   | २२५       | ४५   | ४५   | ४५   | ४५   | ४५   |               |
| १.८    | मचान निर्माण                        | वटा   | ७      | ६००  | ४२००      | ८४०  | ८४०  | ८४०  | ८४०  | ८४०  |               |
| १.९    | सौर्य तारबार मर्मत                  | कि.मी | ३      | १००  | ३००       | ६०   | ६०   | ६०   | ६०   | ६०   |               |
| १.१०   | सौर्य तारबार हेरालु                 | जना   | ५      | ६०   | ३००       | ६०   | ६०   | ६०   | ६०   | ६०   |               |
| १.११   | वृक्षारोपन                          | हे    | ५०     | ५०   | २५००      | ५००  | ५००  | ५००  | ५००  | ५००  |               |
| १.१२   | वृक्षारोपनलाई घेरबार                | कि.मी | १०     | ३००  | ३०००      | ६००  | ६००  | ६००  | ६००  | ६००  |               |
| १.१३   | वन्यजन्तुको लागि पानी पोखरी निर्माण | वटा   | ५      | ५००  | २५००      | ५००  | ५००  | ५००  | ५००  | ५००  |               |
| २      | सामुदायिक विकास                     |       |        |      |           |      |      |      |      |      |               |
| २.१    | धार्मिक वनमा पर्यटकीय स्थल निर्माण  | पटक   | ५      | १००० | ५०००      | १००० | १००० | १००० | १००० | १००० |               |

|      |                             |       |    |      |      |      |      |      |      |      |               |
|------|-----------------------------|-------|----|------|------|------|------|------|------|------|---------------|
| २.२  | उ.स.को नया भवन निर्माण      | वटा   | १  | १८०० | १८०० |      | ६००  | ६००  | ६००  |      |               |
| २.३  | गोलघर निर्माण               | वटा   | १० | ३००  | ३००० | ६००  | ६००  | ६००  | ६००  | ६००  |               |
| २.४  | पर्यटकको लागि बेन्च निर्माण | वटा   | ५० | ५०   | २५०० | ५००  | ५००  | ५००  | ५००  | ५००  |               |
| २.५  | सांस्कृतिक भवन निर्माण      | वटा   | १  | २५०० | २५०० | १२५० |      |      |      | १२५० |               |
| २.६  | सडक ग्राभेलिङ               | कि.मी | ५  | २५०  | १२५० | २५०  | २५०  | २५०  | २५०  | २५०  |               |
| २.७  | हयुम पाइप                   | वटा   | २५ | ६०   | १५०० | ३००  | ३००  | ३००  | ३००  | ३००  |               |
| २.८  | खानेपानी मर्मत तथा सम्भार   | वटा   | ५  | ८०   | ४००  | ८०   | ८०   | ८०   | ८०   | ८०   |               |
| २.९  | सिचाइको लागि बोरिङ          | वटा   | ५  | ४००  | २००० | ४००  | ४००  | ४००  | ४००  | ४००  | स्थानीय सरकार |
| २.१० | प्रवेशद्वार निर्माण         | वटा   | १  | ५००  | ५००  | २५०  | २५०  |      |      |      |               |
| ३    | आयआर्जन तथा सिप विकास       |       |    |      |      |      |      |      |      |      |               |
| ३.१  | होम स्टेको लागि सहयोग       | वटा   | १५ | ५००  | ७५०० | १५०० | १५०० | १५०० | १५०० | १५०० |               |
| ३.२  | ब्युटी पार्लर तालिम         | पटक   | १  | ५०   | ५०   |      |      |      | ५०   |      |               |
| ३.३  | होम स्टे सञ्चालन तालिम      | पटक   | १  | ५०   | ५०   |      | ५०   |      |      |      |               |
| ३.४  | कुक तालिम                   | पटक   | १  | २००  | २००  |      |      |      | २००  |      |               |
| ३.५  | तरकारी खेती तालिम           | पटक   | १  | ५०   | ५०   |      |      |      | ५०   |      |               |
| ३.६  | पशुपालन तालिम               | पटक   | २  | ५०   | १००  |      |      | १००  |      |      |               |
| ३.७  | हाउस वायरिङ तालिम           | पटक   | १  | ५०   | ५०   |      |      |      | ५०   |      |               |
| ३.८  | प्लम्बीङ तालिम              | पटक   | १  | ५०   | ५०   |      |      | ५०   |      |      |               |
| ३.९  | मोबाईल मर्मत तालिम          | पटक   | १  | ५०   | ५०   |      |      | ५०   | ५०   |      |               |
| ३.१० | सिलाई बुनाई तालिम           | पटक   | १  | १००  | १००  |      | १००  |      |      |      |               |
| ३.११ | मौरी पालन तालिम             | पटक   | १  | १००  | १००  |      |      |      |      | १००  |               |

|      |                                              |     |     |     |      |      |      |      |      |      |  |
|------|----------------------------------------------|-----|-----|-----|------|------|------|------|------|------|--|
| ३.१२ | मौरीको घर वितरण                              | वटा | २५० | २५  | ६२५० | १२५० | १२५० | १२५० | १२५० | १२५० |  |
| ३.१३ | सुधारिएको बाखा खोर                           | वटा | २५० | २५  | ६२५० | १२५० | १२५० | १२५० | १२५० | १२५० |  |
| ३.१४ | सुधारिएको कुखुराको खोर                       | वटा | २५० | १५  | ३७५० | ७५०  | ७५०  | ७५०  | ७५०  | ७५०  |  |
| ३.१५ | दुध, डेरी संकलन स्थापनाको लागि सहयोग         | वटा | १   | १०० | १००  |      |      | १००  |      |      |  |
| ३.१६ | पशुलाई खोप कार्यक्रम                         | पटक | १   | १०० | १००  |      |      |      | १००  |      |  |
| ३.१७ | फलफुलको विरुवा वितरण                         | वटा | २०० | ०.४ | ८०   | १६   | १६   | १६   | १६   | १६   |  |
| ३.१८ | विषादी प्रयोग गर्ने तालिम                    | पटक | ३   | १०० | ३००  | १००  |      |      | १००  | १००  |  |
| ३.१९ | उन्नत जातको बोका वितरण                       | वटा | १७  | ५०  | ८५०  | १७०  | १७०  | १७०  | १७०  | १७०  |  |
| ४    | <b>संरक्षण शिक्षा</b>                        |     |     |     |      |      |      |      |      |      |  |
| ४.१  | CBAPU परिचालन                                | पटक | ५   | ५०  | २५०  | ५०   | ५०   | ५०   | ५०   | ५०   |  |
| ४.२  | Eco-club सहयोग                               | पटक | ५   | ५०  | २५०  | ५०   | ५०   | ५०   | ५०   | ५०   |  |
| ४.३  | अध्ययन अवलोकन भ्रमण                          | पटक | २   | २०० | ४००  |      | २००  |      | २००  |      |  |
| ४.४  | संरक्षण सम्बन्धी निती नियमको अर्न्तकृया      | पटक | ५   | ५०  | २५०  | ५०   | ५०   | ५०   | ५०   | ५०   |  |
| ४.५  | मानव वन्यजन्तु द्वन्द्व न्युनीकरण गोष्ठी     | पटक | ५   | ५०  | २५०  | ५०   | ५०   | ५०   | ५०   | ५०   |  |
| ४.६  | जनचेतना मुलक कार्यक्रम                       | पटक | ५   | १०० | ५००  | १००  | १००  | १००  | १००  | १००  |  |
| ४.७  | होडिड बोर्ड                                  | वटा | १५  | १५  | २२५  | ४५   | ४५   | ४५   | ४५   | ४५   |  |
| ४.८  | वालपेन्टिङ                                   | वटा | १   | १०० | १००  |      |      | १००  |      |      |  |
| ४.९  | विद्यालय स्तरीय संरक्षण सम्बन्धी प्रतियोगिता | पटक | ५   | १०० | ५००  | १००  | १००  | १००  | १००  | १००  |  |
| ५    | <b>प्रशासनिक</b>                             |     |     |     |      |      |      |      |      |      |  |

|      |                         |      |   |     |     |              |              |              |              |              |  |
|------|-------------------------|------|---|-----|-----|--------------|--------------|--------------|--------------|--------------|--|
| ५.१  | कार्यालय सहयोगी         | जना  | ५ | १९५ | ९७५ | १९५          | १९५          | १९५          | १९५          | १९५          |  |
| ५.२  | मसलन्द                  | वर्ष | ५ | ३०  | १५० | ३०           | ३०           | ३०           | ३०           | ३०           |  |
| ५.३  | सञ्चार                  | वर्ष | ५ | ५   | २५  | ५            | ५            | ५            | ५            | ५            |  |
| ५.४  | विजुली पानी             | वर्ष | ५ | १०  | ५०  | १०           | १०           | १०           | १०           | १०           |  |
| ५.५  | भ्रमण यातायात           | पटक  | ५ | ५०  | २५० | ५०           | ५०           | ५०           | ५०           | ५०           |  |
| ५.६  | मिटिडमा खाजा            | पटक  | ५ | १५  | ७५  | १५           | १५           | १५           | १५           | १५           |  |
| ५.७  | कम्प्युटर               | वटा  | १ | १०० | १०० |              |              | १००          |              |              |  |
| ५.८  | प्रीन्टर                | वटा  | १ | ४०  | ४०  |              | ४०           |              |              |              |  |
| ५.९  | फर्निचर                 | पटक  | १ | १५० | १५० |              |              |              | १५०          |              |  |
| ५.१० | पञ्च वर्षिय योजना तयारी | वर्ष | १ | १५  | १५  |              |              |              |              | १५           |  |
|      | <b>जम्मा</b>            |      |   |     |     | <b>१३९३१</b> | <b>१३५७१</b> | <b>१३४३१</b> | <b>१३८८१</b> | <b>१३७९६</b> |  |

### Annex IX: Land cover of PNP and its BZ

| SN           | Land use land cover Class | Area of Park (km <sup>2</sup> ) | Percent    | Area of BZ (km <sup>2</sup> ) | Percent       |
|--------------|---------------------------|---------------------------------|------------|-------------------------------|---------------|
| 1            | Barren                    | 0.58                            | 0.08       | 0.8                           | 0.28          |
| 2            | Bush                      | 8.04                            | 1.18       | 11.39                         | 4.00          |
| 3            | Forest                    | 625.87                          | 91.55      | 155.7                         | 54.69         |
| 4            | Grass                     | 1.37                            | 0.20       | 1.44                          | 0.51          |
| 5            | Pond or lake              | 0.01                            | 0.00       | 0.03                          | 0.01          |
| 6            | Water bodies              | 0.81                            | 0.12       | 1.16                          | 0.41          |
| 7            | Sand                      | 46.52                           | 6.80       | 29.44                         | 10.34         |
| 8            | Nursery/Plantation        | 0.45                            | 0.07       | 0.73                          | 0.26          |
| 9            | Cultivation               |                                 |            | 83.98                         | 29.50         |
| <b>Total</b> |                           | <b>683.65</b>                   | <b>100</b> | <b>284.67</b>                 | <b>100.00</b> |

### Annex X: Tourist no. visiting PNP

| Year     | Number of Tourists |             |       |
|----------|--------------------|-------------|-------|
|          | Nepali             | *Foreigners | Total |
| 2057/058 | 329                | 4           | 333   |
| 2058/059 | 275                | 1           | 276   |
| 2059/060 | 81                 | 3           | 84    |
| 2060/061 | 35                 | 0           | 35    |
| 2061/062 | 10                 | 6           | 16    |
| 2062/063 | 87                 | 0           | 87    |
| 2063/064 | 197                | 0           | 197   |
| 2064/065 | 34                 | 0           | 34    |
| 2065/066 | 7                  | 11          | 18    |
| 2066/067 | 78                 | 6           | 84    |
| 2067/068 | 110                | 2           | 112   |
| 2068/069 | 311                | 32          | 343   |
| 2069/070 |                    |             | 192   |
| 2070/071 |                    |             | 379   |
| 2071/072 |                    |             | 263   |
| 2072/073 |                    |             | 235   |
| 2073/074 | 171                | 37          | 208   |
| 2074/075 | 410                | 95          | 505   |
| 2075/076 | 395                | 15          | 410   |
| 2076/077 | 378                | 14          | 392   |
| 2077/078 | xx                 | xx          | xx    |
| 2078/079 | 769                | 8           | 777   |

Note: \*Foreigners also include Indian nationals.

### Annex XI: Park and Security Posts of PNP

| SN | HQ / Sector / Range<br>Post / Guard Post /<br>Security Post | Place                      | No. of Posts |          |          |           |
|----|-------------------------------------------------------------|----------------------------|--------------|----------|----------|-----------|
|    |                                                             |                            | Park         |          | NA       | Both      |
|    |                                                             |                            | Office/Post  | Hattisar |          |           |
| 1  | NP Headquarter                                              | Aadhavar, Bara             |              |          |          | 1         |
| 2  | Mahadev post (under construction)                           | Mahadev khola, Parsa       |              |          |          | 1         |
| 3  | Charbhaiya range post                                       | Charbhaiya Parsa           |              |          |          | 1         |
| 4  | Western Sector                                              | Gaduwaline, Parsa          |              |          |          | 1         |
| 5  | Bhata post                                                  | Bhata, Parsa               |              | 1        |          | 1         |
| 6  | Nirmalbasti post                                            | Nirmalbasti, Parsa         |              |          |          | 1         |
| 7  | Shikaribas post                                             |                            |              |          |          | 1         |
| 8  | Pratappur post                                              | Manahari,<br>Makwanpur     |              | 1        |          | 1         |
| 9  | Padampokhari post                                           | Padampokhari,<br>Makwanpur | 1            |          |          |           |
| 10 | Northern Sector                                             | Lamitaar, Makwanpur        |              |          |          | 1         |
| 11 | Chakri range post                                           | Chakri, Makwanpur          |              |          |          | 1         |
| 12 | Amlekhgunj range post                                       | Amlekhgunj, Bara           |              | 1        |          | 1         |
| 13 | Pathlaiya post                                              | Pathlaiya, Bara            | 1            |          |          |           |
| 14 | Dudhaura post                                               | Dudhaura, Bara             |              |          |          | 1         |
| 15 | Sahajnath post                                              | Sahajnath, Bara            |              |          |          | 1         |
| 16 | Ratanpuri range post                                        | Ratanpuri, Bara            |              |          |          | 1         |
| 17 | Tamagadhi (under construction)                              | Tamagadhi. Bara            |              |          |          | 1         |
| 18 | Dambarpur                                                   |                            |              |          |          | 1         |
|    | <b>Total</b>                                                |                            | <b>2</b>     | <b>3</b> | <b>-</b> | <b>16</b> |

NA- Nepal Army

## Annex XII: Administrative structure of PNP

| SN | Designation                    | Level                                 | Approved<br>Position | Status of<br>fulfillment |           |           | Remarks        |
|----|--------------------------------|---------------------------------------|----------------------|--------------------------|-----------|-----------|----------------|
|    |                                |                                       |                      | Fulfilled                | Vacant    | Contract  |                |
| 1  | Chief Conservation Officer     | Gazetted Second Class/Under Secretary | 1                    | 1                        | 0         |           |                |
| 2  | Assistant Conservation Officer | Gazetted Third Class /Officer         | 3                    | 3                        | 0         |           |                |
| 3  | Account Officer                | Gazetted Third Class /Officer         | 1                    | 1                        | 0         |           |                |
| 4  | Veterinary Doctor              | Gazetted Third Class /Officer         | 1                    | 1                        | 0         |           |                |
| 5  | Ranger                         | Non-gazetted first class              | 9                    | 9                        | 0         |           | 1 study leave  |
| 6  | Subba                          | Non-gazetted first class              | 2                    | 1                        | 1         |           |                |
| 7  | Computer Operator              | Non-gazetted first class              | 1                    | 0                        | 1         |           |                |
| 8  | Khardar                        | Non-gazetted Second class             | 3                    | 1                        | 2         |           |                |
| 9  | Senior Gamescout               | Non-gazetted Second class             | 15                   | 15                       | 0         |           |                |
| 10 | Senior Gamescout               | Non-gazetted Fourth class             | 4                    | 2                        | 2         |           |                |
| 11 | Game Scout                     | Class less                            | 57                   | 41                       | 16        |           | 1 kaaj to KTWR |
| 12 | Office Assistant               | Class less                            | 1                    | 0                        | 1         | 1         |                |
| 13 | Driver                         | Class less                            | 3                    | 0                        | 3         | 3         |                |
|    |                                | <b>Sub total</b>                      | <b>101</b>           | <b>75</b>                | <b>26</b> | <b>4</b>  |                |
| 14 | Subba (Hattisar)               | Non-gazetted first class              | 1                    | 1                        | 0         |           |                |
| 15 | Daroga                         | Non-gazetted Second class             | 1                    | 0                        | 1         |           |                |
| 16 | Fanit                          | Class less                            | 10                   | 10                       | 0         | 10        |                |
| 17 | Pachhuwa                       | Class less                            | 10                   | 10                       | 0         | 10        |                |
| 18 | Mahut                          | Class less                            | 10                   | 7                        | 3         | 4         |                |
|    |                                | <b>Sub total</b>                      | <b>32</b>            | <b>28</b>                | <b>4</b>  | <b>24</b> |                |
|    |                                | <b>Total</b>                          | <b>133</b>           | <b>103</b>               | <b>30</b> | <b>28</b> |                |

**Annex XIII: Allowable quantity of Sand, Stone and Grevel from different rivers and stream of BZ**

| SN | Name of UC       | Name of the Rivers and Rivulets | Ghat                                         | Length (m) | Width (m) | Depth (m) | Vol m3  |
|----|------------------|---------------------------------|----------------------------------------------|------------|-----------|-----------|---------|
| 1  | Manahari         | Manhari                         | Ramauli Pratapur, Simpani                    | 3000       | 100       | 0.75      | 225000  |
| 2  | Manahari         | Rapti khola                     | Simpani, Ramauli Pratapur, Jyamire, Rajaiya, | 9000       | 200       | 0.75      | 1350000 |
| 3  | Lok priya        | Chauraha khola                  | Chauraha khola                               | 3000       | 75        | 0.75      | 168750  |
| 4  | Lok priya        | Rapti khola                     | Chauraha dovan, School khahare               | 3000       | 50        | 0.75      | 112500  |
| 5  | Lok priya        | School khahare                  | School khahare                               | 2500       | 40        | 0.75      | 75000   |
| 6  | Lok priya        | Sukaura khola                   | Club chowk                                   | 2500       | 40        | 0.75      | 75000   |
| 7  | Lok priya        | Badh khola                      | Jhala, bandh khola                           | 4000       | 40        | 0.75      | 120000  |
| 8  | Ujjwal bhavishya | Rapti                           | Tangra khola dovan                           | 4500       | 50        | 0.75      | 168750  |
| 9  | Ujjwal bhavishya | Thado khola                     | Thado khola dovan                            | 4000       | 50        | 0.75      | 150000  |
| 10 | Ujjwal bhavishya | Teduwa khola                    | Sarentar                                     | 1500       | 30        | 0.75      | 33750   |
| 11 | Ujjwal bhavishya | Haadi khola                     | Sarentar                                     | 3000       | 40        | 0.75      | 90000   |
| 12 | Ujjwal bhavishya | Masine khola                    | Lamitar                                      | 5000       | 50        | 0.75      | 187500  |
| 13 | Ujjwal bhavishya | Tangra khola                    | Lamitar                                      | 3000       | 70        | 0.75      | 157500  |
| 14 | Ujjwal bhavishya | Dhaharey khola                  | Rapti                                        | 4500       | 50        | 0.75      | 168750  |
| 15 | Lok hit          | Sano ra thulo chure khola       | Chhyapal khola                               | 2000       | 50        | 0.75      | 75000   |
| 16 | Lok hit          | Chakari                         | Chakari, Makari                              | 2000       | 60        | 0.75      | 90000   |

|    |                         |                                    |                                                                        |      |     |      |        |
|----|-------------------------|------------------------------------|------------------------------------------------------------------------|------|-----|------|--------|
|    |                         | khola                              |                                                                        |      |     |      |        |
| 17 | Lok hit                 | Sukauri khola                      | Goth damar,<br>Chakauri                                                | 1500 | 50  | 0.75 | 56250  |
| 18 | Prakiti<br>samrakchhyan | Rapti river                        | Ramantar,<br>Ghorle,<br>Aaldamar,<br>Charghare                         | 5000 | 80  | 0.75 | 300000 |
| 19 | Prakiti<br>samrakchhyan | Chakari<br>khola                   | Chakari, Makari                                                        | 1500 | 25  | 0.75 | 28125  |
| 20 | Prakiti<br>samrakchhyan | Sugaura<br>khola                   | Gaida dhap                                                             | 1200 | 50  | 0.75 | 45000  |
| 21 | Padam milan             | Kukhreni<br>khola                  | Padam pokhari                                                          | 3000 | 50  | 0.75 | 112500 |
| 22 | Padam milan             | Thulo thali<br>khola               | Banda chaur                                                            | 1500 | 30  | 0.75 | 33750  |
| 23 | Padam milan             | Thulo thali<br>bagar               | Ramantali,<br>Thulo thali                                              | 3000 | 50  | 0.75 | 112500 |
| 24 | Padam milan             | Tutey pani<br>and simpani<br>khola | Tuteyani,<br>Simpani, Situ CF                                          | 3000 | 30  | 0.75 | 67500  |
| 25 | Kusum batika            | Oriya khola                        | Fireline CF to<br>Sundar tole                                          | 2500 | 80  | 0.75 | 150000 |
| 26 | Kusum batika            | Bire khola                         | Aath ghare                                                             | 2000 | 50  | 0.75 | 75000  |
| 27 | Nirmalbasti             | Oriya khola                        | Dipu danda,<br>Majhi basti                                             | 2000 | 80  | 0.75 | 120000 |
| 28 | Nirmalbasti             | Bire khola                         | Gole tole,<br>Gumba line                                               | 1000 | 40  | 0.75 | 30000  |
| 29 | Nirmalbasti             | Sikaribas<br>khola                 | Sikari bas pool                                                        | 1500 | 60  | 0.75 | 67500  |
| 30 | Amleshwor               | Churia<br>Dhudhaura<br>khola       | Chakari way,<br>Bisghari pump<br>Pool No. 1, Pool<br>No. 2, poll No. 3 | 3000 | 50  | 0.75 | 112500 |
| 31 | Amleshwor               | Bijaure khola                      | Bisghari pump 1<br>no. pool                                            | 4000 | 50  | 0.75 | 150000 |
| 32 | Amleshwor               | Bhedaha<br>khola                   | Hattisar, Range<br>Post                                                | 2000 | 70  | 0.75 | 105000 |
| 33 | Amleshwor               | Chiple khola                       | Hattisar, Range<br>Post                                                | 3000 | 50  | 0.75 | 112500 |
| 34 | Sunakhari               | Oriya khola                        | Thulo bagh                                                             | 2000 | 100 | 0.75 | 150000 |

|    |                                                                   |                             |                                |      |     |      |           |
|----|-------------------------------------------------------------------|-----------------------------|--------------------------------|------|-----|------|-----------|
|    |                                                                   |                             | morcha                         |      |     |      |           |
| 35 | Panchamukhi                                                       | Oriya khola                 | Thulo bagh morcha              | 2500 | 100 | 0.75 | 187500    |
| 36 | Churiyamai                                                        | Kukhreni khola              | Below chure highway bridge     | 4000 | 100 | 0.75 | 300000    |
| 37 | Churiyamai                                                        | Kukhreni to uttarpani khola | Khukreni                       | 4000 | 150 | 0.75 | 450000    |
| 38 | Janahit                                                           | Bhedaha khola               | Pathlaiya, Janahit, Bhimeshwor | 4000 | 150 | 0.75 | 450000    |
|    | <b>Total</b>                                                      |                             |                                |      |     |      | 6463125   |
|    | <b>Total allowable volume (50% of the total) in m<sup>3</sup></b> |                             |                                |      |     |      | 3231562.5 |

#### **Annex XIV-A: Participants of Task force meeting at DNPWC**

Date: 24/06/2079

Venue: DNPWC, Kathmandu

| SN | Name                   | Designation                              | Organization |
|----|------------------------|------------------------------------------|--------------|
| 1  | Ashok Kumar Ram        | Chief Conservation Officer / Coordinator | PNP          |
| 2  | Gopal Khanal           | Assistant Management Officer/ member     | DNPWC        |
| 3  | Pemba Shrestha         | Assistant Planning Officer/ member       | DNPWC        |
| 4  | Bishnu Prasad Shrestha | Management Officer                       | DNPWC        |
| 5  | Ram Chandra Khatiwada  | Planning Officer                         | DNPWC        |
|    | Rishi Ram Dhakal       | Assistant Management Officer/member      | DNPWC        |
| 6  | Pushpa Kumari Mishra   | Ranger                                   | DNPWC        |

#### **Annex XIV-B: Participants of staff meeting at PNP**

Date: 16/08/2079

Venue: PNP meeting hall, Adhavar

| SN | Name                 | Designation                | Organization |
|----|----------------------|----------------------------|--------------|
| 1  | Ashok Kumar Ram      | Chief Conservation Officer | PNP          |
| 2  | Surya Khadka         | Asst. Conservation Officer | PNP          |
| 3  | Amrit Bhatta         | Asst. Conservation Officer | PNP          |
| 4  | Himal Pathak         | Ranger                     | PNP          |
| 5  | Bibek Shrestha       | Ranger                     | PNP          |
| 6  | Bishnu Pd. Poudel    | Ranger                     | PNP          |
| 7  | Manisha Yadav        | Ranger                     | PNP          |
| 8  | Prashant Jha         | Kharidar                   | PNP          |
| 9  | Dharmendra Chaudhary | Senior Game Scout          | PNP          |
| 10 | Saurav Shrestha      | Consultant                 | NRCS         |

#### **Annex XIV-C: Participants of BZMC meeting**

Date: 03/09/2079

Venue: PNP meeting hall, Adhavar

| SN | Name            | Designation                | Organization |
|----|-----------------|----------------------------|--------------|
| 1  | Ashok Kumar Ram | Chief Conservation Officer | PNP          |

|    |                        |                            |                            |
|----|------------------------|----------------------------|----------------------------|
| 2  | Sita Ram Aryal         | Chairperson/BZMC           | Manahari BZUC              |
| 3  | Dal Bahadur Syangtan   | Chairperson                | Lokpriya BZUC              |
| 4  | Raj Kumar Thing        | Chairperson                | Padam Milan BZUC           |
| 5  | Ashabir Lama           | Chairperson                | Prakriti Samrakchhyan BZUC |
| 6  | Nawa Raj Gautam        | Chairperson                | Ujjwal Bhabishya BZUC      |
| 7  | Chandra Bahadur Moktan | Chairperson                | Lokhit BZUC                |
| 8  | Min Bahadur Ghalan     | Chairperson                | Churiamai BZUC             |
| 9  | Raj Kumar Manandhar    | Chairperson                | Amleshwor BZUC             |
| 10 | Jay Chandra Das Tharu  | Chairperson                | Pancha Mukhi BZUC          |
| 11 | Bhim Bahadur Pakhrin   | Chairperson                | Sunakhari BZUC             |
| 12 | Amrit Lal Shrestha     | Chairperson                | Janahit BZUC               |
| 13 | Min Bahadur Shrestha   | Chairperson                | Nirmalbasti BZUC           |
| 14 | Buddi Lal Pakhrin      | Chairperson                | Kusum Batika BZUC          |
| 15 | Mukti Bikram Shah      | Batallion Commandar        | Siddhi Baks Battalion      |
| 16 | Rajesh Rana            | Major                      | Siddhi Baks Battalion      |
| 17 | Surya Khadka           | Asst. Conservation Officer | PNP                        |
| 18 | Amrit Bhatta           | Asst. Conservation Officer | PNP                        |
| 19 | Himal Pathak           | Ranger                     | PNP                        |
| 20 | Bibek Shrestha         | Ranger                     | PNP                        |
| 21 | Bishnu Pd. Poudel      | Ranger                     | PNP                        |
| 22 | Naresh Raivar          | Ranger                     | PNP                        |
| 23 | Laxmi Dhital           | Ranger                     | PNP                        |
| 24 | Manisha Yadav          | Nayab Subba                | PNP                        |
| 25 | Prashant Jha           | Kharidar                   | PNP                        |
| 26 | Dharmendra Chaudhary   | Senior Game Scout          | PNP                        |
| 27 | Saurav Shrestha        | Consultant                 | NRCS                       |

#### **Annex XIV-D: Participants of the Staff meeting PNP**

Date: 31/02/2080

Venue: PNP meeting hall, Aadhavar

| SN | Name                  | Designation                | Organization |
|----|-----------------------|----------------------------|--------------|
| 1  | Ashok Kumar Ram       | Chief Conservation Officer | PNP          |
| 2  | Surya Khadka          | Asst. Conservation Officer | PNP          |
| 3  | Amrit Bhatta          | Asst. Conservation Officer | PNP          |
| 4  | Santosh Bhagat        | Asst. Conservation Officer | PNP          |
|    | Dr. Chandra Kala Rana | Veterinary Doctor          | PNP          |
| 5  | Himal Pathak          | Ranger                     | PNP          |

|   |                 |            |      |
|---|-----------------|------------|------|
| 6 | Bibek Shrestha  | Ranger     | PNP  |
| 7 | Ajeet Yadav     | Ranger     | PNP  |
| 8 | Manisha Yadav   | Ranger     | PNP  |
| 9 | Saurav Shrestha | Consultant | NRCS |

#### **Annex XIV-E: Participants of the Staff meeting PNP**

Date: 32/02/2080

Venue: PNP meeting hall, Aadhavar

| SN | Name                  | Designation                | Organization |
|----|-----------------------|----------------------------|--------------|
| 1  | Ashok Kumar Ram       | Chief Conservation Officer | PNP          |
| 2  | Surya Khadka          | Asst. Conservation Officer | PNP          |
| 3  | Amrit Bhatta          | Asst. Conservation Officer | PNP          |
| 4  | Santosh Bhagat        | Asst. Conservation Officer | PNP          |
|    | Dr. Chandra Kala Rana | Veterinary Doctor          | PNP          |
| 5  | Himal Pathak          | Ranger                     | PNP          |
| 6  | Bibek Shrestha        | Ranger                     | PNP          |
| 7  | Ajeet Yadav           | Ranger                     | PNP          |
| 8  | Manisha Yadav         | Ranger                     | PNP          |
| 9  | Saurav Shrestha       | Consultant                 | NRCS         |

#### **Annex XIV-F: Participants of Task force meeting at DNPWC**

Date: 17/03/2080

Venue: DNPWC meeting hall, Kathmandu

| SN | Name                   | Designation                              | Organization |
|----|------------------------|------------------------------------------|--------------|
| 1  | Ashok Kumar Ram        | Chief Conservation Officer / Coordinator | PNP          |
| 2  | Gopal Khanal           | Assistant Management Officer/ member     | DNPWC        |
| 3  | Pemba Shrestha         | Assistant Planning Officer/ member       | DNPWC        |
| 4  | Bishnu Prasad Shrestha | Management Officer                       | DNPWC        |
| 5  | Ram Chandra Khatiwada  | Planning Officer                         | DNPWC        |
|    | Rishi Ram Dhakal       | Assistant Management Officer/member      | DNPWC        |
| 6  | Pushpa Kumari Mishra   | Ranger                                   | DNPWC        |

## Annex XIV-G: Participants of the meeting at DNPWC

Date: 20/03/2080

Venue: DNPWC meeting hall, Kathmandu

| SN | Name                    | Designation                    | Organization         |
|----|-------------------------|--------------------------------|----------------------|
| 1  | Mr. Ajaya Karki         | Deputy Director General        | DNPWC                |
| 2  | Shyam Bajimaya          | Former DG DNPWC                | PA management Expert |
| 3  | Mr. Fanindra Kharel     | Former DG DNPWC                | PA management Expert |
| 4  | Mr. Hari Bhadra Acharya | Planning Officer               | PNP                  |
| 5  | Bishnu Pd. Shrestha     | Management Officer             | DNPWC                |
| 6  | Manoj Shah              | Ecologist                      |                      |
| 7  | Ram Chandra Khatiwada   | Crime Control Officer          | DNPWC                |
| 8  | Chndra Sekhar Chaudhary | Conservation Education Officer | DNPWC                |
| 9  | Dr. Ashok Kumar Ram     | Chief Conservation Officer     | PNP                  |
| 10 | Sungava Kayastha        | Computer Officer               |                      |
| 11 | Rabindra Karki          | Computer Officer               |                      |
| 12 | Pemba Sherpa            | Assistant Planning Officer     |                      |
| 13 | Rishi Ram Dhakal        | Assistant Management Officer   |                      |
| 14 | Ashim Thapa             | Assistant Ecologist            |                      |
| 15 | Daya Ram Pandey         | Ranger                         |                      |
| 16 | Milan Khadka            | Ranger                         |                      |
| 17 | Mahesh Basnet           | ZSL                            | ZSL Nepal            |
| 18 | Subash Subedit          | GIS Expert                     | NRCS                 |
| 19 | Ushma Gyawali           | PA management Expert           | NRCS                 |
| 20 | Saurav Shrestha         | Consultant                     | NRCS                 |

### **Annex XV: Management Plan Preparation Team**

| <b>SN</b> | <b>Name</b>            | <b>Designation</b>                            | <b>Office</b> |
|-----------|------------------------|-----------------------------------------------|---------------|
| 1         | Dr. Ashok Kumar Ram    | Chief Conservation Officer/Coordinator        | PNP           |
| 2         | Mr. Rishi Ram Dhakal   | Assistant Management Officer/member           | DNPWC         |
| 3         | Mr. Pemba Sherpa       | Assistant Planning Officer/member             | DNPWC         |
| 4         | Bishnu Prasad Shrestha | Management Officer                            | DNPWC         |
| 5         | Hari Bhadra Acharya    | Planning Officer                              | DNPWC         |
| 6         | Saurav Shrestha        | Consultant/Management Plan Preparation Expert | NRCS          |
| 7         | Subas Subedi           | GIS Expert                                    | NRCS          |
| 8         | Ushma Gyawali          | Support staff                                 | NRCS          |

### **Annex XVI: Reviewer of the Management Plan**

| <b>SN</b> | <b>Name</b>              | <b>Designation</b>                        | <b>Office</b>                                            |
|-----------|--------------------------|-------------------------------------------|----------------------------------------------------------|
| 1.        | Mr. Bishnu Pd. Thapaliya | Initial Reviewer /<br>Conservation Expert | ZSL                                                      |
| 2         | Mr. Shyam Bajimaya       | External Reviewer                         | Freelance                                                |
| 3         | Dr. Krishna Pd. Acharya  | External Reviewer                         | Freelance                                                |
| 4         | Dr. Shanta R. Jnawali    | External Reviewer                         | WWF Nepal                                                |
| 5         | Mr. Ajaya Karki          | External Reviewer/DDG                     | Department of National Park<br>and Wildlife Conservation |



**Government of Nepal**  
**Ministry of Forests and Environment**



**Department of National Parks and Wildlife  
Conservation**



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