



# BANKE NATIONAL PARK AND ITS BUFFER ZONE

## **MANAGEMENT PLAN**

FY: 2075/76-2079/80



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

**Banke National Park Office**

Obhari, Banke





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Government of Nepal  
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Department of National Parks & Wildlife Conservation



Date : 2075/6/7

## Foreword

The meeting of the council of ministers (Cabinet) held in Kalapatthar, near Sagarmatha Base Camp at an altitude of 5146 m on December 04, 2009 called upon international community to take action in mitigating climate change impacts. In the same meeting, it was decided to increase the coverage of Protected Areas by establishing Banke National Park. In this context, the Park was gazetted on Asadh 28, 2067 B.S. (12<sup>th</sup> of July 2010) to provide additional habitat for wild tigers in Nepal. Subsequently, Government of Nepal participated in the first Tiger Summit in St. Petersburg, Russia from 21-24 November, 2010 and expressed its commitment to conserve tiger by doubling its population by 2022. This area was also recognized as “Gift to the Earth” in 2000 by Government of Nepal. Banke National Park is a part of larger Tiger Conservation Unit together with Bardia National Park in the west and Katarniaghat Wildlife Sanctuary in India through Khata corridor as well as Suhelwa Wildlife Sanctuary of India through Kamdi corridor.



The park protects parts of Churia range extending from east to west of the country which is very fragile. Any disturbance to the area can bring disastrous landslides and very destructive flashfloods damaging settlements and agricultural lands in the Terai. Besides, Churia recharge ground water from rain water which is important for agriculture and livelihood of the people of the Terai. The park harbors seven protected species of mammals that includes Tiger, Leopard cat, Spotted lingsang, Wild elephant, Striped hyaena, Four-horned antelope, Indian Pangolin). It is one of the newly established National Park of the country and since its establishment it has focused mainly in the infrastructure development for administrative and security purposes.

In fact, this management plan is an outcome of the hard work of Management Plan Preparation Team and I would like to take opportunity to acknowledge the support extended by service provider, conservation partners, stakeholders, including BZ communities. Besides, a large number of professionals, practitioners and other stakeholders have made valuable contributions during its preparation. A comprehensive management plan for Banke National Park and it's BZ is very important in addressing the emerging issues and challenges. I believe that this management plan is the first one in this regard. At this juncture, I would request all conservation and development partners to join hands to translate vision into action.

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

Man Bahadur Khadka  
Director General





Date: 2075-06-07

## Acknowledgement

The development of five year management plan of Banke National Park and its Buffer Zone is rarely the task of a single individual or even a small team of experts. Our knowledge and understanding as a team for biodiversity conservation comes as a plan for the first time. We strongly believe that this plan is morally incomplete unless we acknowledge our contributors.



I would like to express our sincere gratitude to Director General, Mr. Man Bahadur Khadka, for his never ending guidance encouragement and support. Similarly, I wish to express our gratitude to Deputy Director General as well as reviewer Mr. Gopal Prakash Bhattarai for his constant support, guidance in making this plan realistic and implementable. I would like to thank, former DG and External Reviewer, Mr. Shyam Bajimaya for his critical review towards the management plan.

A very special gratitude goes to all the management section staffs starting from Management Officer (Under Secretary) Mr. Narayan Rupakheti, Assistant Management Officer Mr. Bishnu Prasad Thapaliya and Mr. Santosh Kumar Bhagat for invaluable assistance. I would also like to thank task force team members, Assistant Planning Officer Mrs. Sarswoti Sapkota, all the DNPWC exports and Conservation Partners (NTNC, ZSL Nepal and WWF Nepal) for their valuable comment and cooperation to improve this plan.

For the assistance in the field, I would like to thank all the respondents of the interaction. Similarly, I am are very much thankful to the UC members who participated UC's five year plan preparation process. I thank profusely to all the BZMC members for participating in BZUC's plan preparation and providing valuable suggestion as well. In this regard, I would like to thank the chairperson Mr. Gehendra Kumar Khadka.

I highly acknowledge and express sincere thanks to technical team member Mr. Saurav Shrestha from Sustainable Development Initiative Centre (SDIC) for his untiring efforts in supporting us in plan preparation which includes field level interaction, write up, analysis, central level interaction and finalizing. I would also like to thank other team members of SDIC, Mr. Tika Ram Poudel for supporting in UC level plan preparation process and thanks are also goes to Mr. B. N. Dhakal for preparing Maps.

Last but not the least, I would like to thank, Mr. Lal B. Bhandari, Assistant Conservation Officer, for supporting in write up and data generation. Similarly, I would also like to thank Assistant Conservation Officers Mr. Rabin Chaudhary and Mr. Pramod Kumar Yadav and all the staffs who have been very much supportive to prepare this plan in whatever way they could.

Dil Bahadur Purja Pun  
Chief Conservation Officer





नेपाल सरकार  
वन तथा वातावरण मन्त्रालय  
राष्ट्रिय निकुञ्ज तथा वन्यजन्तु संरक्षण विभाग

फोन नं. : ४२२०८५०  
४२२०९१२  
४२२७९२६  
फ्याक्स नं. ४२२७६७५



(.....) व्यवस्थापन शाखा

संकेत नं. :-  
पत्र संख्या :- २०७५।७६ व्य.नं १३४  
चलानी नं. :- २०२



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मिति :- २०७५।१।२४

विषय :- बाँके राष्ट्रिय निकुञ्ज र त्यसको मध्यवर्ती क्षेत्रको पञ्चवर्षिय व्यवस्थापन योजना (२०७५।७६-२०७९।८०) र सो को प्रारम्भिक वातावरणीय परीक्षण प्रतिवेदन (IEE) स्वीकृत गरिएको सम्बन्धमा ।

श्री बाँके राष्ट्रिय निकुञ्ज कार्यालय  
ओभरी, बाँके

प्रस्तुत विषयमा बाँके राष्ट्रिय निकुञ्ज र त्यसको मध्यवर्ती क्षेत्रको पञ्चवर्षिय व्यवस्थापन योजना (२०७५।७६-२०७९।८०) र सो को प्रारम्भिक वातावरणीय परीक्षण प्रतिवेदन (Initial Environmental Examination-IEE) स्वीकृतको लागि त्यस कार्यालयको पत्र संख्या २०७५।७६ मिति २०७५।४।२९ को टिप्पणी सहित पेश हुन आएको ।

उल्लिखित फाईल उपर कारवाही हुँदा “स्वीकृत व्यवस्थापन योजनालाई नेपाली भाषामा अनुवाद गरी अंग्रेजी र नेपाली दुवै भाषाको योजनालाई छापेर सरोकारवालालाई वितरण गर्ने” गरी बाँके राष्ट्रिय निकुञ्ज र त्यसको मध्यवर्ती क्षेत्रको पञ्चवर्षिय व्यवस्थापन योजना (२०७५।७६-२०७९।८०) र सो को प्रारम्भिक वातावरणीय परीक्षण प्रतिवेदन (IEE) मिति २०७५।१।२४ को विभागीय निर्णयानुसार स्वीकृत गरिएको हुँदा स्वीकृत व्यवस्थापन योजना र सो को प्रारम्भिक वातावरणीय परीक्षण प्रतिवेदन यसैसाथ राखी कार्यान्वयनको लागि पठाईएको व्यहोरा निर्णयानुसार अनुरोध छ ।

.....  
(विष्णु प्रसाद थपलिया)  
सहायक व्यवस्थापन अधिकृत



## Executive Summary

Banke National Park (BaNP) was established on Baisakh 30, 2067 B.S. (13<sup>th</sup> May, 2010) and gazetted on Asadh 28, 2067 B.S. (12<sup>th</sup> July 2010). It extends over 550 km<sup>2</sup> in Banke district and its Buffer Zone, 343 km<sup>2</sup>, encompasses parts of Banke, Dang and Salyan districts. It is connected with Bardia National Park (BNP) towards west which further links with Katarniaghat Wildlife Sanctuary in India via national and community forests of Khata corridor. Similarly, it also adjoins with Kamdi corridor, through national and community forests, and connects Suhelwa Wildlife Sanctuary (SWS) of India. It is an important component of Terai Arc Landscape (TAL) which provides additional habitat for tigers.

BaNP contains an array of eight ecosystem types such as Sal forest, Deciduous riverine forest, Savannahs and grasslands, Mixed hardwood forest, Flood plain community, Bhawar and Foot hills of Churia range. It is a home to 263 plants, 34 mammals, more than 236 birds, 24 reptiles, 9 amphibians and 55 fish species. Out of them 7 species of mammals (Tiger, Leopard cat, Spotted lingsang, Wild elephant, Striped hyaena, Four-horned antelope, Indian Pangolin), two species of reptiles (Python and Golden monitor lizard) and one species of bird (Giant hornbill) are in the protected list of National Parks and Wildlife Conservation Act, 2029.

To kindle the conservation spirit in the hearts of people, BaNP has focused on participatory resource management in 1 Municipality and 5 Rural Municipalities in Province 5 (Banke and Dang districts) and Karnali Province (Salyan district). The Park protects parts of Churia range which is very fragile as any disturbance to the area can bring disastrous landslides and very destructive flashfloods. The Park adjoins BNP and provide extended habitat which ensures better chance for the long term survival of various species mainly tiger by providing opportunity for genetic exchange and gene flow.

Major issues of the Park are insufficient grassland and wetlands which is degraded due to anthropogenic activities (illegal grazing); Natural succession that has converted grassland into woodlands; Short north-south span habitat for wildlife that has not been able to withhold wild animals inside the core area and drives wildlife to move to the southern forest crossing the east-west highway, and often gets hit by vehicle; improper construction of ramps in the Sikta irrigation which has become the cause of death of wildlife as they cannot come up after they fell down. As in the other National Park, exploitation of sand and gravel has been an issue of the Park for sustainable management.

The plan emphasizes to improve the habitat by increasing the area and number of grassland and creating water holes especially in dry areas through the Park. Focus will also be given to improve Kamdi corridor and manage efficiently by collaborating with Divisional Forest Office (DFO) and other concerned stakeholders. The plan will coordinate with various stakeholders such as Sikta irrigation, Nepal Electricity Authority, Nepal Telecommunication Corporation and Ncell to manage the infrastructure that has been constructed in the park and BZ in such a way that there will have no negative impact in the conservation of wildlife. Similarly, Transport company operating buses, truck and taxi along with private car and motor bikes will be oriented and monitored so that roadside killing of wildlife will be drastically reduced. The tourism infrastructures will be developed and private entrepreneurs will be encouraged to make their investment to attract visitors and contribute in employment and income generation at local level. Above all, BZ communities will be strengthened to implement conservation, community development, skill development and awareness raising in order to solicit participation in biodiversity conservation.

This is the first Management Plan of BaNP prepared under the leadership of Chief Conservation Officer following the Protected Area Management Plan Preparation Procedure, 2073. The plan envisions to provide extended habitat for mega fauna species especially wild tigers of western Terai thereby delivering essential benefits for the wellbeing of local people. To achieve this vision, the Park will emphasize on conservation of biological diversity through improvement and management of wildlife habitat involving local communities in participatory manner. The specific objectives of management plan are:

- To protect and conserve biological diversity of the Park with special focus on protected wildlife species;
- To manage and enhance habitat of both predator and prey base species thereby maintaining healthy ecosystem of terai and churia region;
- To promote tourism in the Park and BZ through tourism infrastructure development and local culture conservation;
- To intensify local communities' engagement in biodiversity conservation through conservation awareness raising, climate adaptation, minimizing human-wildlife conflict and improving social and economic well-being of local people; and
- To strengthen institutional capacity to carry out integrated conservation and development activities through research, training and cooperation among stakeholders.

The 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. 1,232,393,911.00 (NRs. One billion two hundred thirty two million three hundred ninety three thousand nine hundred and eleven) with the allocation of 77% in program and 23% in administrative budget. The plan emphasize mainly to BZ management that includes the budget of BZUCs as well, Park protection, Habitat management with the allocation of 31%, 15% and 10% budget respectively. Taking the bench mark of GoN administrative budget allocation of FY 2074/75, the total allocation budget for BaNP is 64%. The deficit budget of 36% will have to be fulfilled by conservation partners and other stakeholders such as different line agencies, provincial and local Government. With the implementation of the plan it is expected it will generate 138818 person days of labour.

## कार्यकारी सारांश

बाँके राष्ट्रिय निकुञ्ज २०६६ साल मंसिर १८ गते कालापत्थरमा बसेको मन्त्रिपरिषद्को बैठकमा भएको निर्णयलाई मध्यनजर गर्दै २०६७ साल वैशाख ३० गते स्थापना भएको हो । यसले बाँके, दाङ र सल्यान जिल्लाको केही भाग समेटेको छ । यो निकुञ्ज ५५० वर्ग कि.मि. क्षेत्रफलमा र मध्यवर्ती क्षेत्र ३४३ वर्ग कि.मि. क्षेत्रफलमा फैलिएको छ । यो राष्ट्रिय निकुञ्ज पश्चिममा बर्दिया राष्ट्रिय निकुञ्जसँग जोडिँदै खाता जैविक मार्ग र सामुदायिक वन हुँदै भारतको कर्तर्नियाघाट वन्यजन्तु आरक्षसँग जोडिएको छ । त्यसै गरी यो निकुञ्ज राष्ट्रिय वन र सामुदायिक वन हुँदै काम्दी जैविक मार्गसँग जोडिँदै भारतको सुहेलवा वन्यजन्तु आरक्षसँग जोडिएको छ । यो राष्ट्रिय निकुञ्ज बाघको संरक्षणको लागि थप वासस्थान प्रदान गर्ने तराई भू-परिधिको महत्वपूर्ण क्षेत्र पनि हो ।

बाँके राष्ट्रिय निकुञ्जमा ८ वटा पारिस्थितिकीय प्रणाली पाइन्छ । यहाँ सालको वन, पतभङ्ग नदी तटीय वन, घाँसे मैदान, मिश्रित कडा काठजन्य वन, समतल जमिन, भावर र चुरे क्षेत्र रहेको छ । यस निकुञ्जमा २६३ प्रजातिका वनस्पतिहरू, ३४ प्रजाति स्तनधारी, २३६ भन्दा बढी प्रजाति पंक्षी, २४ प्रजाति सरिसृप, ९ प्रजाति उभयचर, ५५ प्रजाति माछाहरू रहेको छ । ती मध्ये ७ प्रजातिका स्तनधारी (जस्तै: पाटे बाघ, जङ्गली हात्ती, चितुवा, सिलु विरालो, हुँडार, चौका, सालक) १ प्रजातिका चरा (राजधनेश) र २ प्रजातिका सरिसृप (अजिङ्गर र सुन गोहोरो) राष्ट्रिय निकुञ्ज तथा वन्यजन्तु संरक्षण ऐन २०२९ को अनुसूची १ मा समावेश भएका संरक्षित वन्यजन्तु हुन् ।

बाँके राष्ट्रिय निकुञ्जले मध्यवर्ती क्षेत्रमा पर्ने प्रदेश नम्बर ५ को (बाँके र दाङ) र कर्णाली प्रदेश (सल्यान) मा अवस्थित एक नगरपालिका र पाँच गाँउपालिकामा सहभागितात्मक संरक्षणको अवधारणा अनुरूप संरक्षणको कार्यहरू गर्दै आइरहेको छ । यस क्षेत्रको धेरैजसो भाग चुरे क्षेत्रमा पर्छ जुन एकदमै संवेदनशील क्षेत्र हो । यसको विनाशले गर्दा बाढी र पहिरो जाने सम्भावना बढी हुन सक्छ । निकुञ्ज स्थापना हुनुभन्दा पहिले यस क्षेत्रमा अनियन्त्रित चरिचरन र वनजन्य पैदावारहरूको अत्यधिक दोहन भएको थियो । प्राकृतिक घाँसे मैदान विस्तारै वनक्षेत्रमा परिणत भई घाँसे मैदान कम भईरहेको अवस्था छ । घाँसे मैदान बाघको आहार प्रजातिका वन्यजन्तु लगायतका सबै वन्यजन्तुलाई महत्वपूर्ण हुन्छ । त्यस्तै सिमसारहरू पनि गर्मी याममा सुक्दै गईरहेको छ, जसमा वन्यजन्तु र चराहरू आश्रित छन् । यो निकुञ्ज पूर्व पश्चिम क्षेत्रमा लामो छ भने यसको उत्तर-दक्षिण भाग छोटो र साँघुरो रहेको छ । त्यसमा पनि निकुञ्ज क्षेत्रको उत्तरमा चुरे क्षेत्र रहेकोले वन्यजन्तुको बासस्थान र विचरण क्षेत्र अपुग हुन गइ वन्यजन्तु राजमार्ग पार गरेर दक्षिण तिरको राष्ट्रिय वनमा जाने गर्दछ । राजमार्ग पार गरेर जाने क्रममा तीव्र गतिमा आईरहेका गाडीको ठक्करबाट मृत्यु हुन पुग्दछ । त्यस्तै राष्ट्रिय वनमा विचरण गर्न जाने क्रम बढ्दो हुँदा चोरी शिकारी हुने सम्भावना पनि त्यतिकै छ । सिक्टा सिंचाई आयोजनाको निर्माणाधिन नहरमा बेला बेलामा वन्यजन्तुहरू खस्ने र बाहिर आउन नसकि मृत्यु हुने गर्दछ । नहरमा बनाइएका खुङ्किला पर्याप्त छैनन् भने तिनको बनावट वन्यजन्तु मैत्री नहुँदा वन्यजन्तु नहरमा खसेपछि बाहिर आउन नसकी मृत्यु हुने गरेको छ । निकुञ्ज स्थापना हुनु पूर्व निकुञ्ज र मध्यवर्ती क्षेत्रमा ढुङ्गा, गिट्टी र बालुवाको दोहन अत्यधिक भई जलचरको संरक्षणमा चुनौती सृजना भएको पाइन्छ । प्राकृतिक श्रोतको दिगो व्यवस्थापन एक सवालको रूपमा रहेको छ ।

यो व्यवस्थापन योजनाले वन्यजन्तुको बासस्थान सुधार र विस्तार गर्न घाँसे मैदान बढाउँदै लाने र सिमसारको हैसियत राम्रो बनाई यसको क्षेत्रफल पनि बढाउँदै लाने कार्यलाई जोड दिएको छ । वन्यजन्तुलाई वनमा विचरण गर्न प्रशस्त ठाउँ प्रदान गर्न काम्दी जैविक मार्गमा अन्य सरोकारवाला निकायको साथै डिभिजन वन कार्यलयसँग समन्वय र साझेदारी गर्दै संरक्षणका कार्यलाई प्राथमिकतामा राखेको छ । यस व्यवस्थापन योजनाले निकुञ्ज र मध्यवर्ती क्षेत्रमा निर्माण भएको संरचनाहरू जस्तै नेपाल विद्युत प्राधिकरणको प्रसारण लाईन, सिक्टा सिंचाई आयोजनाको नहर, दूर-सञ्चार कम्पनीका टावरहरू जस्ता पूर्वाधारका संरचनाहरूले वन्यजन्तुको संरक्षणमा नकारात्मक असर नपुऱ्याउने गरि बेला बेलामा मर्मत सम्भार गराउन समन्वय गर्नेछ ।

त्यसैगरी राजमार्गमा यातायात कम्पनीबाट संचालित बस, ट्रक र ट्याक्सीहरूको साथै निजी यातायातका साधनहरूलाई यातायातका साधनबाट वन्यजन्तुको मृत्यु हुनेखालका दुर्घटना हुन नदिन अनुगमन र यसको संरक्षणको लागि योगदान पुऱ्याउन संरक्षणसम्बन्धी अभिमुखीकरण गरिनेछ । पर्यटनबाट स्थानीय बासिन्दाको आय आर्जन बढाउन पर्यटनसंग सम्बन्धित भौतिक पूर्वाधारहरू विकास गरिनेछ । निजी उद्यमीहरूलाई पर्यटन व्यवसायमा आकर्षित गर्नको लागि लगानीमैत्री वातावरण बनाइनेछ । यी बाहेक मध्यवर्ती क्षेत्रमा जैविक विविधता संरक्षण कार्यमा स्थानीय बासिन्दाहरूको सक्रिय सहभागिताको लागि संरक्षण, सामुदायिक विकास, सीप विकास तथा आय आर्जन र संरक्षण सचेतनामा जोड दिईनेछ ।

बाँके राष्ट्रिय निकुञ्ज र यसको मध्यवर्ती क्षेत्रको यो पहिलो व्यवस्थापन योजना हो । यो पञ्च वर्षिय व्यवस्थापन योजना संरक्षित क्षेत्रको व्यवस्थापन योजना तयारी कार्यविधि, २०७३ बमोजिम प्रमुख संरक्षण अधिकृतको अगुवाइमा बनाईएको छ । यो व्यवस्थापन योजनाले विशेष गरी पाटे बाघलाई विस्तारित वासस्थान प्रदान गर्दै स्थानीय समुदायको आय आर्जनमा सुधार ल्याउने दूरदृष्टि लिएको छ । यसको लागि वन्यजन्तुको वासस्थान सुधार गरी स्थानीय समुदायको सहभागिता गराउँदै जैविक विविधताको संरक्षण गर्ने लक्ष्य लिएको छ । व्यवस्थापन योजनाको उद्देश्य निम्न अनुसार रहेका छन् ।

- निकुञ्जमा पाईने जैविक विविधताहरूको संरक्षण गर्दै संरक्षित वन्यजन्तुको संरक्षणमा विशेष जोड दिने,
- वन्यजन्तुको वासस्थान पुनर्स्थापना, सुधार र व्यवस्थापन गर्दै तराई र चुरे क्षेत्रको पारिस्थितिकीय प्रणाली स्वस्थ बनाउने,
- निकुञ्ज र मध्यवर्ती क्षेत्रमा पर्यटनका पूर्वाधारहरू विकास गर्दै स्थानीय संस्कृतिको जगेर्ना एवं प्रवर्द्धन गर्ने,
- स्थानीय समुदायको संस्थागत सुदृढीकरण गर्दै संरक्षण, जीविकोपार्जनमा सुधार, जलवायु अनुकूलन, संरक्षण सचेतना बढाउँदै सहभागितात्मक तवरमा जैविक विविधताको संरक्षण गर्ने,
- अध्ययन, अनुसन्धान र तालिमजस्ता कार्यक्रम गर्दै निकुञ्ज, मध्यवर्ती क्षेत्र र सरोकारवाला कर्मचारी र पदाधिकारीहरूको क्षमता अभिवृद्धि गर्ने ।

यस व्यवस्थापन योजनाले निकुञ्जको सुरक्षा, प्रजाति संरक्षण, वासस्थान व्यवस्थापन, वन्यजन्तुको स्वास्थ्यको हेरचाह, आगलागि नियन्त्रण, अतिक्रमण नियन्त्रण, अध्ययन अनुसन्धान, पर्यटन विकास र प्रवर्द्धन, जलवायु परिवर्तन अनुकूलन र मध्यवर्ती क्षेत्रमा गरिने विभिन्न कार्यहरू गरी निकुञ्जको उद्देश्य प्राप्त गर्ने सोच लिएको छ । व्यवस्थापन योजनाले परिलक्षित गरेका कार्यहरू कार्यान्वयन गर्न रु. १,२३,२३,९३,९११ (रुपैया एक अरब तेईस करोड तेईस लाख त्रियानब्बे हजार नौ सय एघार) प्रस्ताव गरेको छ । यस योजनाले प्रस्ताव गरेको बजेट मध्ये कार्यक्रमतर्फ ७७% र प्रशासनीकतर्फ २३% रहेको छ । यस योजनामा मध्यवर्ती क्षेत्रतर्फ समावेश भएको कार्यक्रमको भार ३१% छ । जसमा मध्यवर्ती क्षेत्र उपभोक्ता समितिहरूको कार्यक्रम समावेश भएको छ । त्यस्तै यस व्यवस्थापन योजनाले निकुञ्जको सुरक्षा र वासस्थान व्यवस्थापनमा क्रमशः १५% र १०% बजेट छुट्याईएको छ । हाल सालबसाली रुपमा यस निकुञ्जको लागि विनियोजन हुने गरेको बजेट योजनाले प्रस्ताव गरेको कूल बजेटको ६४% मात्र हुन आउँछ । तसर्थ, बाकी ३६% रकम प्रदेश सरकार, स्थानीय निकाय, संरक्षणका साभोदार संघ संस्था वा अन्य सरोकारवाला निकायबाट पूर्ति गर्नु पर्नेछ । यस व्यवस्थापन योजनामा प्रस्ताव गरिएका सम्पूर्ण कार्यक्रमहरू कार्यान्वयन हुन सकेमा योजना अवधिभर १३८८१८ (एक लाख अठतीस हजार आठ सय अठार) श्रमदिन स्थानीयस्तरमा रोजगारी सृजना हुनेछ ।

# ACRONYMS

ACO	Assistant Conservation Officer
APR	Annual Progress Report
ASL	Above Sea Level
APU	Anti-Poaching Unit
BaNP	Banke National Park
BNP	Bardia National Park
BZ	Buffer Zone
BZCF	Buffer Zone Community Forest
BZMC	Buffer Zone Management Committee
BZUC	Buffer Zone User Committee
BZUG	Buffer Zone User Group
CBAPU	Community Based Anti-Poaching Unit
CBD	Convention on Biological Diversity
CBOs	Community Based Organizations
CCO	Chief Conservation Officer
CCTV	Close Circuit Television
CIB	Central Investigation Bureau
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
DAO	District Administration Office
DCC	District Coordination Committee
DFO	Divisional Forest Office
LSO	Livestock Service Office
DNPWC	Department of National Parks and Wildlife Conservation
GIS	Geographic Information System
GoN	Government of Nepal
GPS	Global Positioning System
HH	Household

IAS	Invasive Alien Species
IEC	Information Education and Communication
IUCN	International Union for Conservation of Nature and Natural Resources
KWS	Katarniaghat Wildlife Sanctuary
MoFE	Ministry of Forests and Environment
MoFSC	Ministry of Forests and Soil Conservation
NGOs	Non-Governmental Organizations
NPWC	National Parks and Wildlife Conservation
NTFP	Non Timber Forest Product
OP	Operational Plan
PA	Protected Area
SWS	Suhelwa Wildlife Sanctuary
TCAP	Tiger Conservation Action Plan
TCU	Tiger Conservation Unit
ToT	Training of Trainers
VDCs	Village Development Committee
VIC	Visitor Information Center

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## **Process of management plan preparation**

The management plan of Banke National Park and its Buffer Zone is prepared following the template of Protected Area Management Plan Preparation Procedure, 2073. In due course, participatory approach was adopted in preparing the first management plan (2075/76-2079/80). Nepal biodiversity Strategy and Action Plan (2014-2020) was the guiding document from conceptualizing Vision and Goal of the plan; devise strategy and plan activities. In the process, following steps were followed; i) reviewed published literatures, documents, annual reports, project reports; ii). consultation meeting with Park staffs, Nepali Army; iii) discussed with tourism operators; iv) conducted climate vulnerability assessment of National Park and its Buffer Zone focusing on species, habitats, human communities and their livelihoods, and infrastructures v) shared the draft plan including logical framework with Park staffs; vi) Carried out planning meeting and discussion with all Buffer Zone User Committees; vii) Organized sharing of draft plan with Buffer Zone Management Committee members and stakeholders for their comments and input; viii) Conducted sharing of draft plan at central level with Department of National Parks and Wildlife Conservation (DNPWC) staff, representatives of Ministry of Forests and Environment and experts from conservation partners for feedbacks and input; ix) Prepared refine draft accommodating all the comments and feedback; x) Forwarded the refined draft plan to external reviewers to obtain comments and suggestion; xi) incorporated comments and feedbacks from external reviewer and submitted to DNPWC for final comments and suggestion; and xii) finalized the plan and submitted for approval.

## **Part A**

# **The Existing Situation**



# Introduction of the Protected Area

### 1.1 Name, Location, Constitution and Extent

#### 1.1.1 Name: Banke National Park and its Buffer Zone.

#### 1.1.2 Location

Banke National Park (BaNP) lies in the Mid-western Terai of Nepal in between N 27°58'13" to N 28°21'26" latitude; and E 81°39'29" to E 82°12'19" longitude and adjoins Bardia National Park (BNP) in its eastern side (Figure 1).

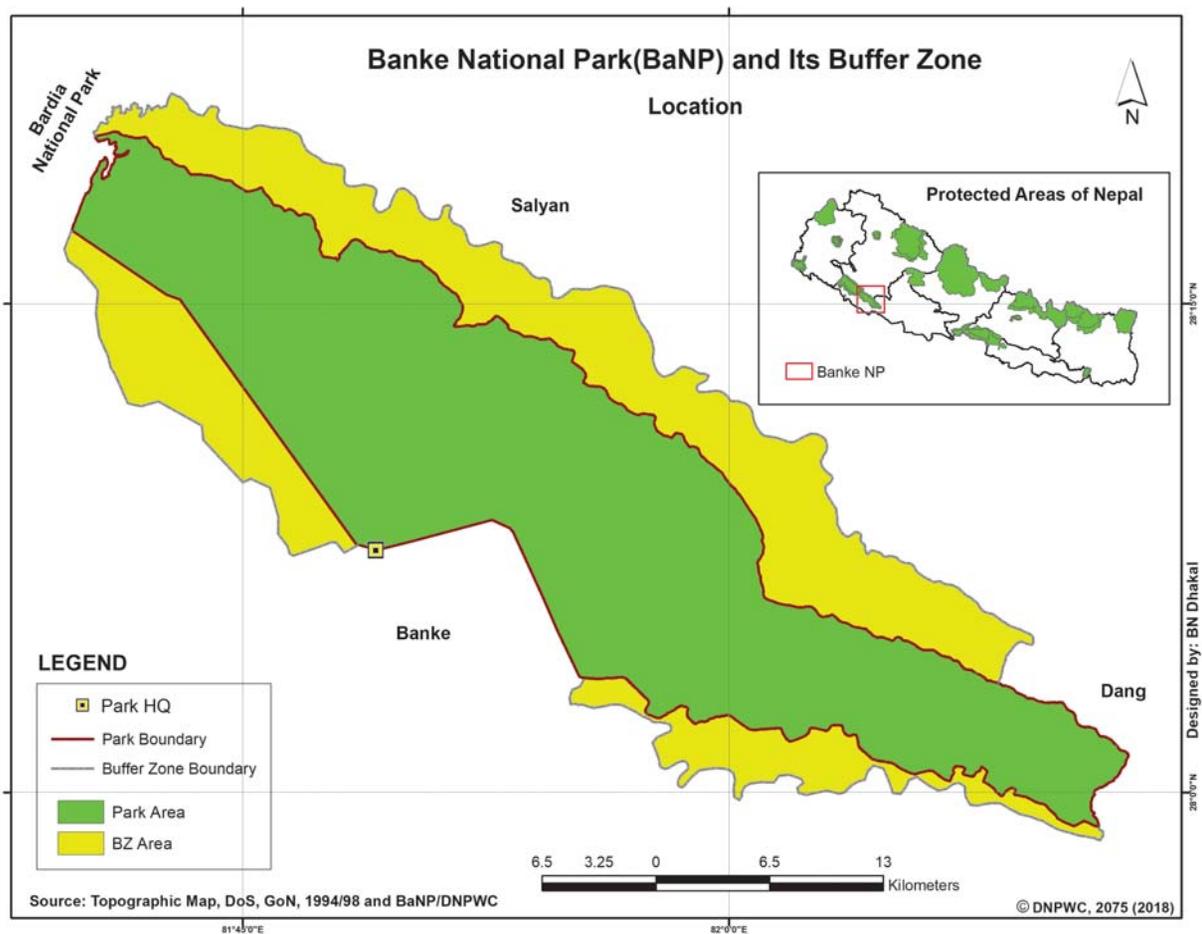


Figure 1: Location map of BaNP and its Buffer Zone

#### 1.1.3 Constitution and Extent

BaNP covers an area of 550 km<sup>2</sup> and is bordered by Buffer Zone (BZ) of 343 Km<sup>2</sup> in the districts of Banke, Salyan and Dang. BaNP and neighboring BNP, these two Protected Area (PA) complex covers 1,518 km<sup>2</sup>. The average length of the Park is 63 kms (east –west) with width varying from 7 to 20 kms (north-south).

**Table 1: BaNP at a glance**

1989	The late King Birendra Bir Bikram Shah gave directive to extend BNP to the east to Banke
1995	Prepared a plan to extend BNP including BZ
2000	Rt. Honorable Prime Minister Mr. Girija Prasad Koirala declared the area "Gift to the Earth"
2009	Recommended to establish BaNP rather than extension of BNP
2010	GoN declared BaNP and its BZ on Baisakh 30, 2067 B.S. (May 13, 2010) from the meeting of council of Ministers held (cabinet) at Kalapatthar, with an Park area of 550 km <sup>2</sup> and BZ of 343 Km <sup>2</sup> which is spread over Banke, Dang and Salyan district
	The Park and its BZ was gazetted on Asadh 28, 2067 B.S. (July 12, 2010)
2013	Tiger count using camera trap: 4 individuals recorded
2018	Tiger count using camera Trap: 21 individuals recorded
	Preparation of first management plan of BaNP

## 1.2 Access

The Park can be reached both by bus and by air from Kathmandu. It is about 10 to 12 hours of vehicle drive from Kathmandu. By air, it is about one hour flight from Kathmandu to Nepalgunj (Ranjha airport) and about fifteen minutes drive to Kohalpur, the Park's western sector office; and from there half an hour drive to Obhari, the Park headquarters.

## 1.3 Statement of Significance

Terai, the southern lowland region of the country, is important area for biodiversity conservation. Once densely forested, Terai has now been mostly cleared for agricultural expansion and human settlements. BaNP is one of the few areas along with few other lowland PAs where Terai forests remain intact. The Park now harbors a wide variety of wildlife including several species of nationally and globally rare and endangered wildlife. The Park represents the mid-western Terai ecosystem of Nepal.

The Park protects parts of Churia range, a hill range extending from east to west of the country which is very fragile. Any disturbance to the area can bring disastrous landslides and destructive flashfloods damaging settlements and agricultural lands in the Terai. Besides, Churia recharge ground water from rain water which is important for agriculture and livelihood of the people of Terai.

One of the important features of the Park is that it adjoins BNP in the west which connects with Katarniaghat Wildlife Sanctuary (KWS) and Suhelwa Wildlife Sanctuary (SWS) of India via Kamdi corridor in the South-east and provides genetic exchange of wildlife among PAs of Nepal and India thereby providing extended habitat for free ranging mega fauna such as tigers and wild elephants.

# Background Information and Attributes

## II CHAPTER

### 2.1 Boundaries (Legal, Ecological)

#### 2.1.1 Legal

BaNP was established on Baisakh 30, 2067 B.S. (May 13, 2010) and gazetted on Asadh 28, 2067 B.S. (12 July 2010) with the Park area of 550 km<sup>2</sup> and 343 km<sup>2</sup> of BZ. The Kohalpur-Surkhet highway is the common boundary between BaNP and BNP. It is the western boundary of the BaNP and eastern boundary of the BNP. The detail of the boundary is given in Annex V.

#### 2.1.2 Legislations

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

The clause 3 (1Ka) of the fifth amendment of National Parks and Wildlife Conservation (NPWC) Act 2029 has made it mandatory that National Parks, Reserve and Conservation Area have to be conserved and managed by the approved management plan. Similarly, 3 Kha (1) also mentions that management plan of BZ should be prepared with the support of respective PAs. The management plan shall be approved by the Department of National Parks and Wildlife Conservation (DNPWC).

##### 2.1.2.2 International Trade in Endangered Species of Wild Flora and Fauna Control Act 2073 (2017)

International Trade in Endangered Wild Flora and Fauna Control Act, 2073, generally known as CITES Act, has recently been enacted. This Act has authorized Chief Conservation Officer (CCO) or officer assigned by him/her of the PA to work as Investigation Officer in illegal wildlife trade case 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) has clearly spelled out requirement of management plan and user committees' operation plans. The management plan will be prepared by CCO with the support of Assistant Conservation Officers (ACOs) and consultant, if required, and submit it to the Director General (DG) of DNPWC for 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.

##### 2.1.2.4 Banke National Park Regulation, 2071 (2014)

Banke National Park Regulation, 2071 has mandated the Park to charge certain fee to the users or visitors for various activities mainly permitted fishing, boating, camping, jungle walk, jeep drive, elephant safari and helicopter landing etc.

### 2.1.3 Ecological

The Park lies in tropical and sub-tropical ecological zones and the Churia, Bhabar (narrow belt of gently sloping southern foothills of the Churia hills) and Terai physiographic regions of Nepal. The Park is contiguous to BNP in the west and provides genetic exchange and gene flow across wildlife population between PAs. Similarly, it connects with KWS and SWS of India via BNP and Kamdi corridor and forms larger Tiger Conservation Unit (TCU) which ensures better chance for the long term survival of species particularly for free ranging large mammals such as tiger, wild elephants and other rare and endangered species.

### 2.2 Geology and Soil

The geological formation of the Churia range is the determining factor for the soil types of the Park. Exposed rocks consist of fine grained sand stone with pockets of clay, shale, conglomerate and freshwater limestone. The Bhabar zone receives boulder, cobbles, gravel, and coarse sand interceded with silt and clay from the Churia.

### 2.3 Topography and Drainage (lake, river system and watershed etc.)

The topography of the Park is very diverse, with flood plains, river valleys and gorges, and the Churia hills in between Rapti River in the south and Babai River in the north. The elevation ranges from 153m (near Dhakeri) to 1247m (Kuine ridge Churia near Phurkesalli). The dominant slope of BaNP is in between 40° and 50° in the Churia hill. The Churia foothills fall in between 5° to 30° slopes. The southern side Terai falls below 5° slope and is fairly flat with deep soil.

Two major rivers, Rapti and Babai enclose the BZ. Rapti River forms the southern boundary, whereas the Babai River has demarcated the northern boundary of BZ (Figure 2).

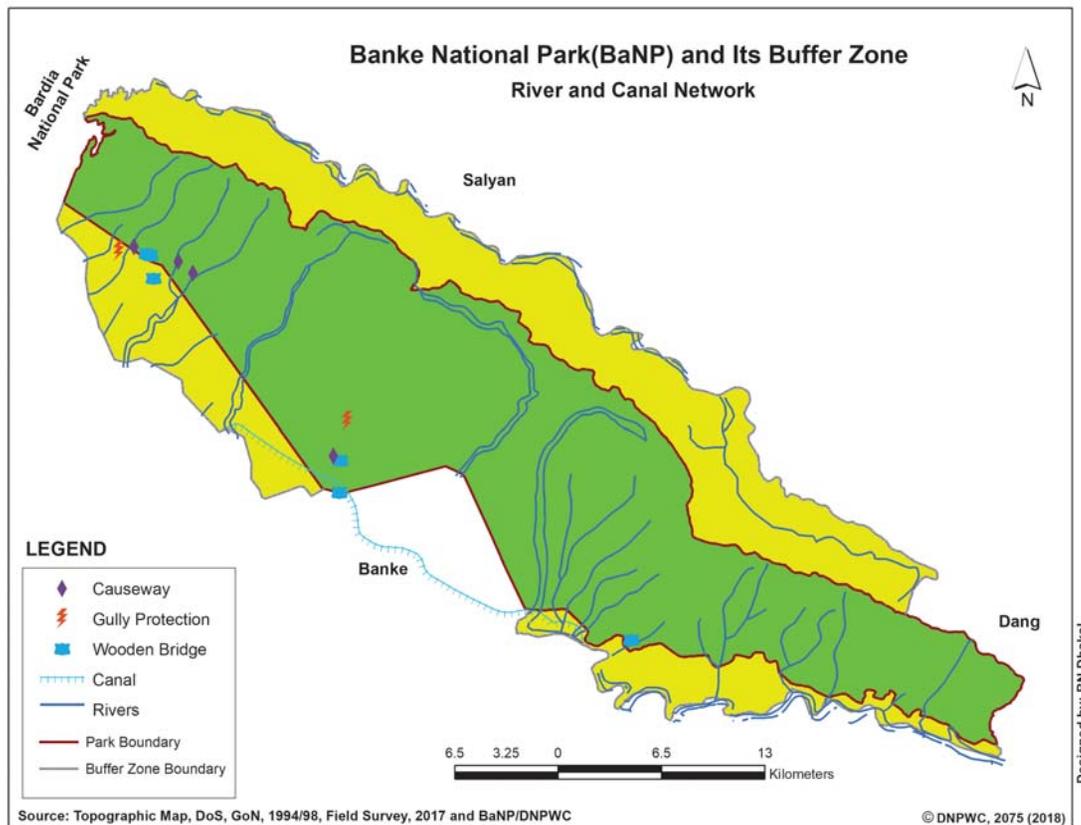


Figure 2: River and canal networks of BaNP

BaNP can be divided into two parts in terms of drainage system: Rapti River basin in the south and the Babai River basin in the north. The Churia ridge forms the catchment boundary and divides the basin. All the rivers of the Park originate from the Churia hills. Main streams in the Rapti catchment (southern aspect) of the Park are Kathauti, Jethi, Syalmare, Ranighat, Jhijhari, Baghsal, Paruwa, Muguwa, Khairi, Sukhar, Lumba/Rolpali, Sauri, Bairiya, Oz Khola and Tilkanya and Malai Khola lies within Babai catchment (northern aspect). Water discharge of these rivers/streams is very high during rainy season. Much of the small streams remain dry during summer season.

## 2.4 Climate

The Park and the BZ has sub-tropical monsoonal climate with summer monsoon from mid-June to early October followed by relatively long, cold dry winter. There are three distinct seasons: hot-dry (February to mid-June), monsoon (mid-June to early October), and cold dry (early October to February).

The area is located in the far-western climatic zone and has a tropical monsoon climate with high humidity throughout the year. Summer is characterized by hot, dry and westerly windy weather where temperature can reach as high as 39°C. The hot humid days give way to the monsoon season that typically lasts from late June until September when rivers become flooded and most of the roads are virtually impassable. Spring refers to a pleasant climate with slightly post monsoon rain and not extreme temperature. The weather in winter is also pleasant with cold morning and nights with occasional cold waves during two months of December and January (Table 2).

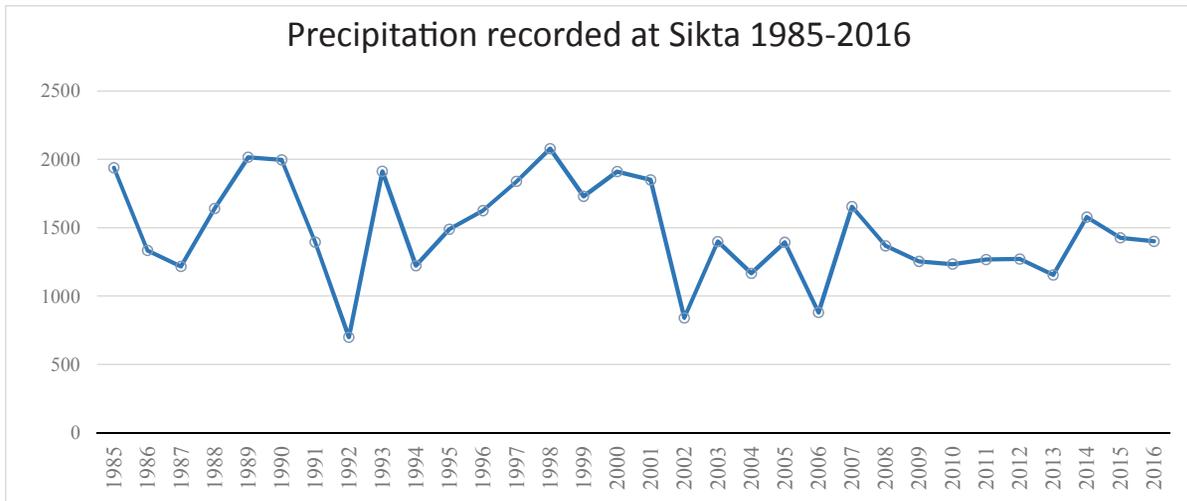
**Table 2: Climatic details of BaNP**

Season	Duration	Temperature Range	Remarks
Winter	November to February	Temperature drops up to 7 <sup>o</sup> C	<ul style="list-style-type: none"> <li>December and January are the coldest months</li> <li>Relative humidity reaches 100% during night</li> <li>Rains are scanty and winds are not common</li> </ul>
Summer	February to May	Day time temperature rises up to 39 <sup>o</sup> C	<ul style="list-style-type: none"> <li>The hottest period is between late April to early June</li> <li>This season is usually dry</li> <li>Man-made fires are common in this season</li> </ul>
Monsoon	June to September	Mean temperature is 34 <sup>o</sup> C	<ul style="list-style-type: none"> <li>The wettest months are July and August</li> <li>About 80% of the annual rainfall is received in this season</li> </ul>

## Rainfall Pattern

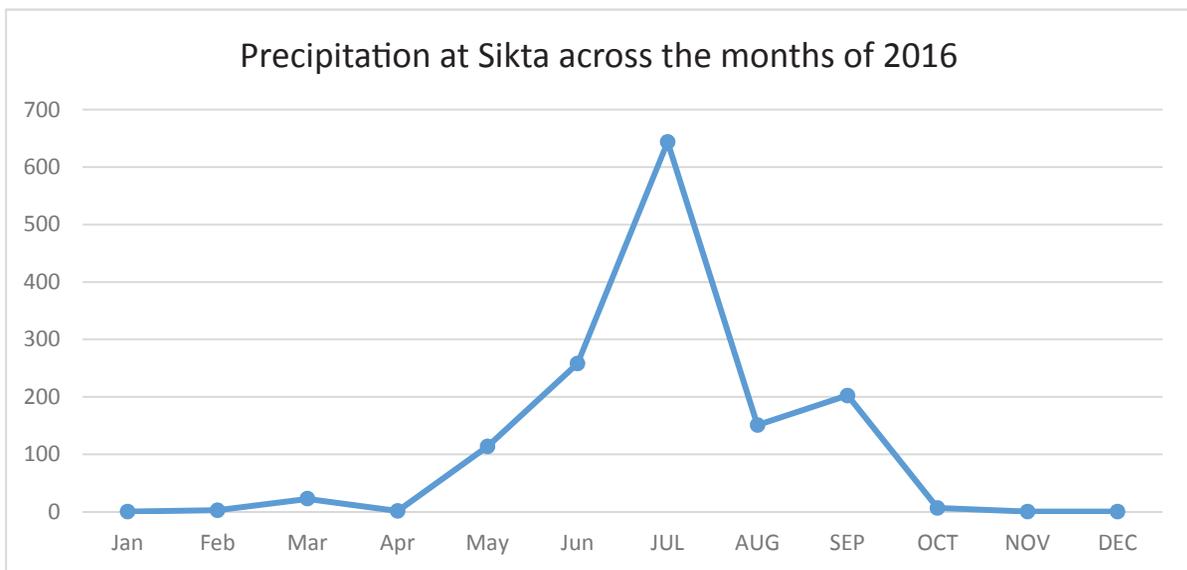
The precipitation data (1985-2016), collected at Sikta irrigation station, received from Department of Hydrology and Meteorology (DHM) shows rainfall pattern is erratic which rises in certain years and falls sharply within in couple of years (Figure 3). The average annual rainfall of the Park is 1474 mm and about 80% of rainfall occurs within four months of rainy season i.e. June to September.

The rainfall data of DHM, 2016 shows the lowest rainfall was received in 1992 with 699 mm whereas 1998 received highest rainfall with 2078 mm. The monsoon months July and August months receive maximum amount of rain (Figure 4). Rains are scanty in winter season although few intermittent showers take place during the period.



**Figure 3:** Annual precipitation at Sikta (DHM 2016)

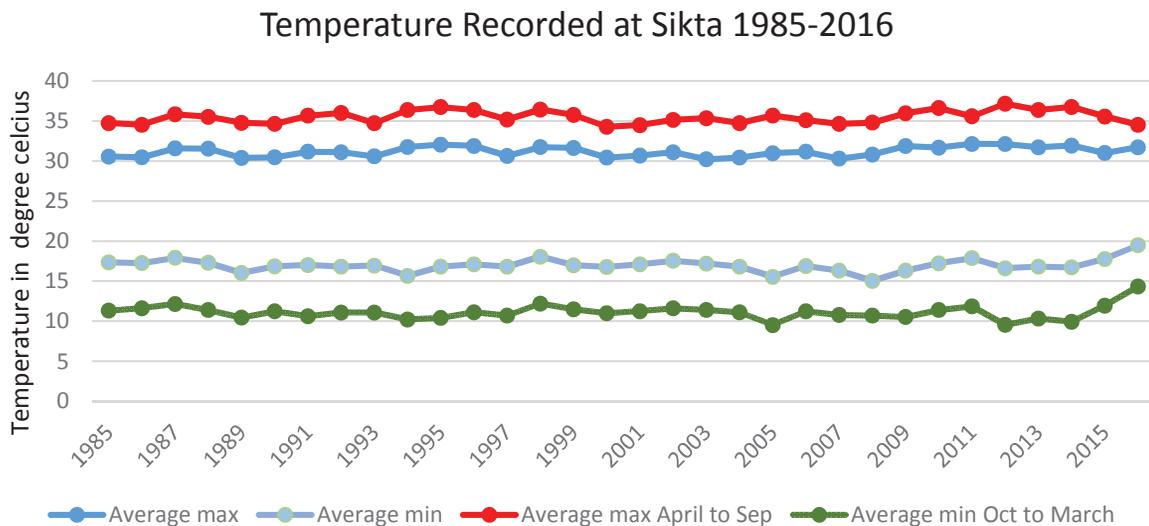
Summer season is usually dry but instances of rains, storm with thunder occurs in March and April. Due to summer rain, water level in the rivers and stream increases throughout the Park. Monsoon rains cause dramatic floods and changes in the character and courses of rivers.



**Figure 4:** Precipitation in the Year 2016 (DHM 2016)

### Temperature

The analysis of historical temperature data shows that temperature is slightly increasing (Figure 5). The maximum temperature reaches up to 39°C with average maximum temperature of 34°C during the summer months. Similarly, the minimum temperature decreases to 7°C and average temperature during winter months is 12°C.



**Figure 5:** Annual Temperature Recorded at Sikta (DHM 2016)

## 2.5 Biodiversity Status

### 2.5.1 Vegetation

The Park can be divided into three ecological regions: a) Plains, b) Bhabar/Churia foothills, and c) the Churia ridge. Several forest types can be categorized according to the ecological regions.

**Plains:** This is a narrow strip which stretches east to west parallel to the National Highway in the southern part of the Park with elevation ranging from 153 m to 250 m ASL. This region contains various forest types: Sal forest, Riverine forest, Floodplain forest, and Khair-Sissoo forest along the streams.

**Bhabar/foothills:** This is the region north of the plains and at the foothills of the Churia hills. The altitudinal variation ranges from 250 m to about 600 m. The main forest types found in this region are: Hill Sal forest, Mixed hardwood forest, and Riverine forest.

**Churia ridge:** This is the Churia hill region with altitudinal range from 600 m up to 1247 m ASL. Mixed Churia hill forest is the main forest type found in the area with hill Sal forests found scattered in places.

The composition of forests, change from site to site even within similar forest types. Forest composition, structure and status change according to the horizontal as well as vertical gradients of the Park. The Bhabar/ foothills of the Churia are more diverse than either of the lowland plains and the Churia forests. Likewise, the western and middle part of the Park are more diverse than the eastern sector. Of the several floras recorded in the Park, 263 species have been identified. Sal (*Shorea robusta*), Asna (*Terminalia tomentosa*), Chiraunjee (*Buchanania latifolia*), Bajhi (*Anogeisus latifolia*), Sissoo (*Delbergia sisoo*), Khair (*Acacia catechu*), Dumri (*Ficus glomerata*), Sindure (*Mallatous philippinsis*), and Jamun (*Eugenia jambolana*) are the dominant species in terms of density and basal area. About 20 to 30% of the area is dominated by Sal forest and other species include Barro (*Terminalia belerica*), Harro (*Terminalia chebula*), Karma (*Adina cordifolia*), Kusum (*Schleichera trijuga*), Bhalayo (*Semecarpus anacardium*), Tantari (*Dillenia pentagyna*) and Bot Dhaiyanro (*Lagerstroemia parviflora*). Details of floras of BaNP is provided in Annex I.

## 2.5.2 Fauna

### 2.5.2.1 Mammals

The Park is home to 34 species of mammals (Annex II). Among them, seven species are protected under National Parks and Wildlife Conservation (NPWC) Act 2029. These protected species are: Tiger (*Panthera tigris*), Leopard Cat (*Felis bengalensis*), Spotted Lingsang (*Prionodon pardicolor*), Asian Wild Elephant (*Elephas maximus*), Striped Hyaena (*Hyaena hyaena*), Four-horned Antelope (*Tetracerus quadricornis*) and Indian Pangolin (*Manis crassicaudata*). Similarly, the common species recorded in the Park are Common Leopard (*Panthera pardus*), Jackal (*Canis aureus*), Fox (*Vulpus bengalensis*), Jungle cat (*Felis chaus*), Bluebull (*Boselaphus tragocamelus*), Hog deer (*Axis porcinus*), Wild Boar (*Sus scrofa*), Sloth bear (*Melursus ursinus*), Spotted deer (*Axis axis*), Barking deer (*Muntiacus muntjak*), Sambar (*Cervus unicolor*), Common Ghoral (*Naemorhaedus goral*), Rhesus monkey (*Macaca mulata*) and Porcupine (*Hystrix indica*).

### 2.5.2.2 Birds

Birds are good indicators of ecosystem and monitoring of birds is an integral part of management system. BirdLife International has identified BaNP as an Important Bird Area (IBA). To date, 236 species of bird have been reported from the Park out of which one protected bird species is reported under NPWC Act, 2029 *i.e.* Great Hornbill (Annex III). Similarly, BaNP harbors six globally and 11 nationally threatened bird species. Great Slaty Woodpecker (*Mulleripicus pulverulentus*), Egyptian Vulture (*Neophron percnopterus*), Whiterumped Vulture (*Gyps bengalensis*), Steppe Eagle (*Aquila nipalensis*), Woolley-necked Stork (*Ciconia episcopus*) and Hodgson's Bushchat (*Saxicola insignis*) are the six globally threatened species found in the Park. Some nationally threatened species found in the Park are Grey Francolin (*Francolinus pondicerianus*), Northern Pintail (*Anas acuta*), Great Hornbill (*Buceros bicornis*), Yellow-wattled Lapwing (*Vanellus malarbaricus*), Himalayan Vulture (*Gyps himalayensis*) and Asian Openbill (*Anastomus oscitans*).

### 2.5.2.3 Herpeto-fauna

Very little study has been done on the herpeto-fauna and invertebrates of the area. To date, 24 species of reptiles and nine amphibian species have been reported from the area (Annex IV). Asiatic (Rock Python) and Golden monitor lizard (*Varanus flavescens*) is endangered species reported from the area and are therefore protected species in the Herpeto-fauna list of NPWC Act 2029. Endangered species Gharial was previously observed in Rapti River. However, at present, it has not been reported so far.

Other common reptiles reported are Garden lizard (*Calotes versicolor*), Brookes' house gecko (*Hemidactylus brookii*), Agama (*Agama tuberculata*), Krait (*Bungarus caeruleus*), King Cobra (*Naja naja*), and Viper (*Vipera russelli*). The common amphibian species recorded in the Park include Bull frog (*Rana tigerina*), Marbled toad (*Bufo stomaticus*) and Common toad (*Bufo melanstictus*).

### 2.5.2.4 Fish diversity

Several fish species are found in the major river systems of the Park. To date, 55 species of fish have been reported out of which 35 fish species are reported from Rapti River only (Bhusal and Kandel 2014).

# Past management and Present Management Practices

## III CHAPTER

### 3.1 Conservation History

In 1989 A.D. The late King Birendra Bir Bikram Shah during his visit to the Mid-western region of Nepal gave directive to the GoN to extend BNP to the east to Banke, to include forests north of the East-West (Mahendra Highway) up to the Churia Hill ridge in the north. In 1990, a meeting held under the chairmanship of the Zonal Commissioner decided to exclude all the villages north of the East-West highway except Bharaiya village of, the then, Kohalpur Village Development Committee (VDC), Balapur of Mahadevpuri VDC and Nepalgunj Forestry Development Project Complex, and to resettle all the villages north of the highway including Obhari settlement. Later, after his visit and inspection of the area, the Mid-Western Regional Forest Director decided to exclude Bharaiya and Balapur settlements and proposed the area with the following boundary:

- a) East: Imaliya-Dang Tulsipur Road,
- b) West: Kohalpur-Surkhet Highway,
- c) North: main Ridge of the Churia Hills, and
- d) South: the Mahendra Highway.

In 1990, A team including Dr. Tirtha Man Maskey, Mr. Ram Prit Yadav and Mr. Krishna Man Shrestha was formed on 29/07/1990 (2047/4/14 B.S.) to prepare a detail proposal including boundary, list of settlements and Households (HHs), population of the area, area for resettlement if necessary, and compensation to be provided.

The team submitted a report to DNPWC and recommended to exclude major settlements, agricultural lands, and Nepalgunj Forestry Development Project area from the proposed extension area. The team proposed the boundary of the extension area as:

- a) East: Shiva Khola,
- b) West: Kohalpur Surkhet highway,
- c) North: main Ridge of the Churia Hills, and
- d) South: a Park road (to be constructed from Chisapani to Obhari excluding road department's camp, Chyama and Baniyabhar villages, NFD and the East-West Highway.

In 1995, A team was formed by DNPWC under the chairmanship of Krishna Man Shrestha, Park and People Project, to submit a report on the extension area of BNP. Later, Krishna Man Shrestha and Shiva Raj Bhatta submitted a report to DNPWC on proposed BZ Boundary, and a proposal of Salyan District Administration Office (DAO) and, then the District Forest Office to include Kavrechour VDC and part of Kalche VDC in proposed Park extension.

In 1996, A meeting organized by DNPWC on 26/07/1996 (2053/4/11 B.S.) decided to form a 'Working Team' to submit a report within one month after conducting field study, collecting and updating information of the extension area.

A meeting organized by Banke District Forest Office on 9/12/1996 (2053/8/24 B.S.) coordinated by the Regional Forest Director and represented by District Forest Office of Banke and CCO of BNP estimated the proposed extension area about 598.4 km<sup>2</sup> and its BZ 301.57 km<sup>2</sup>, and suggested to:

- i) extend the BNP as per the boundary descriptions;
- ii) include the forest in extension area as proposed by Salyan District Forest Office; and
- iii) protect the extension area by BNP staff;

A memorandum was submitted to, the then, HMG by DNPWC for decision on extension to protect catchment of Babai River and its tributaries, and flora and fauna through people's participation.

In 1998, Technical report on Biodiversity inventory, Socio-economy, Policy and legal aspect and an Operational Plan was prepared with the support from WWF Nepal Program.

In 2000, Rt. Honorable Prime Minister Mr. Girija Prasad Koirala declared the area "Gift to the Earth".

In 2009, Rt. Honorable Prime Minister Mr. Madhav Kumar Nepal and Honorable Minister for Forests and Soil Conservation Mr. Deepak Bohora committed to include this Park under PA system specially to conserve tiger, prey base and their habitats during Global Tiger Workshop held in Kathmandu.

Later, in December a Task force including Deputy DG Mr. Megh Bahadur Pandey/DNPWC and a working team including the CCO of BNP were formed. After rapid field visit and interaction with concerned stakeholders, the team recommended establishing BaNP.

In 2010, GoN declared BaNP and its BZ on May 13, 2010.

In 2010, The Park and its BZ was gazetted on July 12, 2010.

### 3.2 Protection of the Park

The illegal activities in BaNP were controlled since the establishment of Park in 2010. Park protection has been undertaken by a battalion of Nepal Army. The battalion headquarters is Obhari and security posts at various strategic locations (Figure 6). Regular patrolling effort from the security posts established in the Park has been one of the major activities to ensure protection. The protection of the Park has resulted in the increase of wildlife population. The increased number of tiger and sighting of other wildlife is an indicator of an effective protection and management.

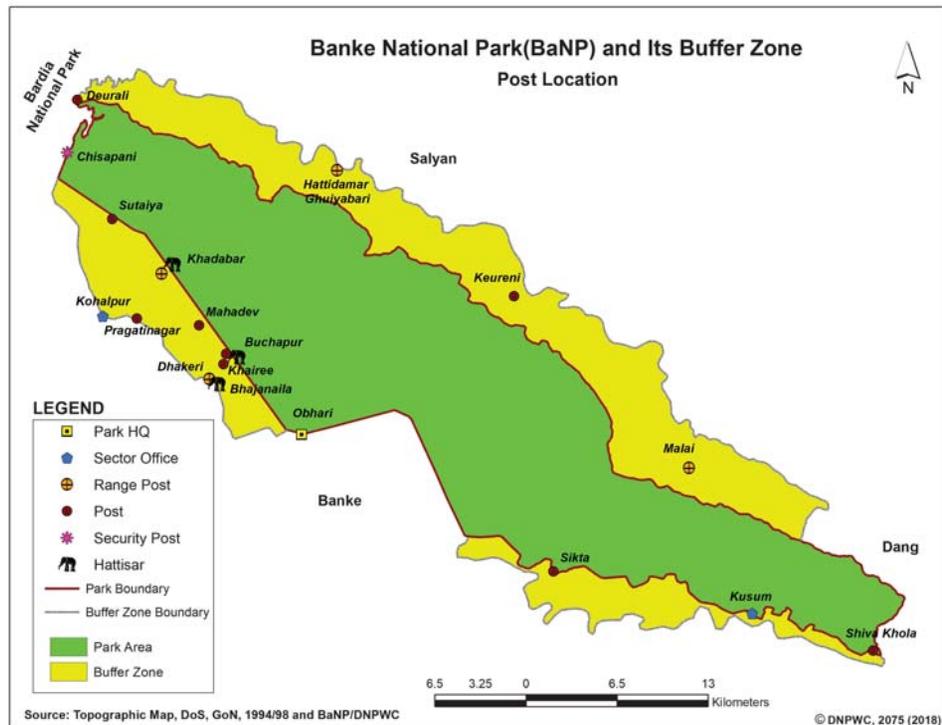
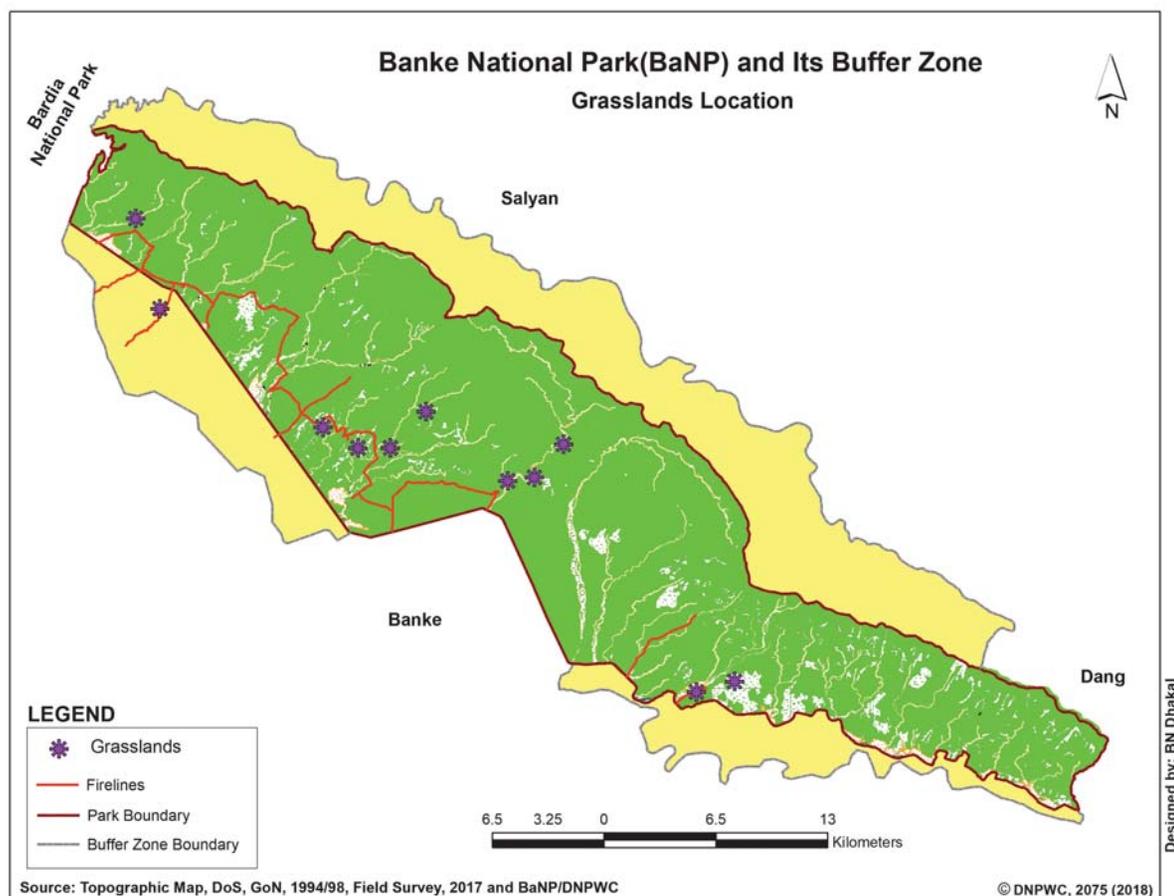


Figure 6: Posts at various locations

### 3.3 Habitat Management

#### 3.3.1 Grasslands

Several grasslands are located in the lower belt of the Park. Most of the grasslands are small in area (Figure 7).

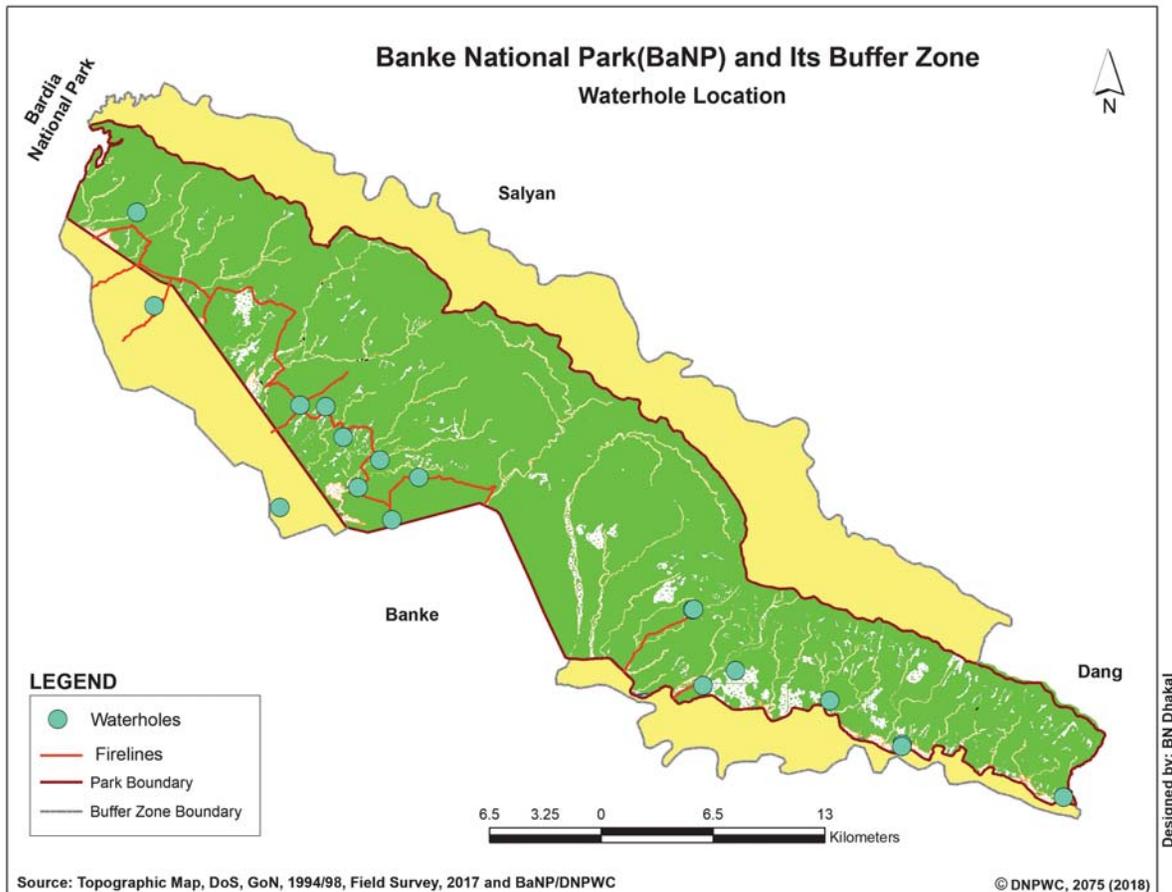


**Figure 7:** Location map of grasslands in BaNP

The small sparsely distributed wooded grasslands are found at Gotheri and Thuria and consist of Siru (*Imperata cylindrica*), Kansh (*Saccharum spontaneum*), and Jobh (*Vetiveria zizanoides*). Similarly, Thulo Narkat (*Arundo donax*) and Narkat (*Phragmites karka*) are found in Babai and Rapti valley of BZ. Pristine wildlife habitats in the Park include inner part of Thuria valley, Khairi khola, and Sukhar Khola.

#### 3.3.2 Wetlands

There are several natural water sources which include rivers, streams, spring sprouts and small puddles. Rapti and Babai rivers are two major rivers which run along the southern and the northern boundary of the Park.



**Figure 8: Waterholes in BaNP**

Important water ponds and water holes inside the forest of foothills of Churia and low lands are Tharu bas, Tirtire, Jethi nala, Giddeni Chaur, Jhijhari Khola, Lute pani, Thuriya Khola, Kaala pani, Khairi Khola, Aghaiya, Rolpali Khola, Bhatti Khola, Bairiya Khola, Buchapur, Obhari, Sukai Khola, and Gotheri (Figure 8).

BaNP has also created waterholes in Giddeni chaur, Jalseni, Khadkabhar, Chunbhatti, Buchapur, Thuria, Pani muhan and Rani gajuri.

### 3.4 Anti-poaching and Intelligence Gathering

Before establishment of the Park, poaching in the area was common. Easy access to the area due to highways, proximity to the Indian border, and poor socio-economic status of the local people were the major causes of poaching. Collection of asparagus tubers, medicinal plants, killing of wild boars was common and occasionally tigers were also killed. The establishment of the Park and patrolling has controlled poaching.

Intelligence gathering is the first step towards an effective anti-poaching operation. Anti-Poaching Unit (APU) is established under CCO to counteract illegal activities in and around the Park. The APU concentrates in collecting information on illegal activities by coordinating concerning institutions such as security units and District Forest Offices. APU also coordinates with locally hired community informants who hold substantial information on poaching and illegal trade of wildlife and timber smuggling. In addition to this, there are Community Based Anti-Poaching Units (CBAPUs) in all the BZUC. These CBAPUs organize regular activities to raise awareness about consequences of involvement in poaching. The CBAPU activities of BaNP are also closely coordinated with BNP.

### **3.5 Tourism and Interpretation**

Since the newly establishment of BaNP, there is a very little tourism activity in the Park. The Park's diverse physiography, unique landscape, biodiversity and social cultural dimension of BZ provide plenty of attractions for tourism. There are many potential areas for tourism development in the Park. Jeep safari, elephant safari and jungle walk in specified areas could be major tourist attractions in the Park. Deuti Bajai temple of Deurali Dada, Jhakri Temple of Jhijhari chure dada and Kukurgauda are some of the culturally important places of BaNP. Similarly, cultural museum, cultural show and rafting and angling in Rapti and Babai rivers could be major tourist attraction in the BZ. BaNP has no interpretation facilities for the visitors and requires at least one Visitor Information Centre in each Sector for the long-term tourism success.

### **3.6 Research and Monitoring**

#### **3.6.1 Research**

As per the arrangement made by the DNPWC, there is well-spoken instruction that the researcher from overseas must get an approval from the Ministry of Forests and Environment prior to conducting any research in the PA. However, the national researchers can conduct with the permission of particular PA also. The researcher is also obliged to report his/her progress of research and study in written to Park management. This is one of the newly established Park and therefore researches are very few in numbers. The Park needs to work out on research needs and priorities and establish links with universities and conservation partners.

#### **3.6.2 Monitoring**

Monitoring of the Park is done on a regular basis by the guard posts in their respective areas. A team comprising of management post staffs and army post staff carry out patrolling on a daily basis by different means such as real time SMART patrolling, walking, bicycles and vehicles. Real time SMART patrolling has been considered very effective tool for monitoring as the movement of security personnel at various locations is seen in real time. In addition to this, the teams send instant information on sightings of wildlife and any illegal activities inside the Park. Whenever deemed necessary, the frequency of patrolling is increased. The CCO and Army commander visit posts separately or jointly to observe physical facility and to motivate the staffs.

### **3.7 Human-Wildlife Conflict**

Livestock depredation by wildlife is common in the BZ area. Tiger and leopard are the main animals that kill livestock such as goats and pigs. Similarly, agricultural crop damage by wildlife is also a major cause of human-wildlife conflicts. Major crop-damaging animals are wild boar, monkey and spotted deer. Human-wildlife conflict is an issue to be addressed effectively and efficiently.

### **3.8 Administration and Organization**

The administration of the Park is headed by CCO who is stationed at the headquarters. Under the CCO, there are 3 ACOs. Two ACOs lead sectors which are located at Kohalpur (Western), and Kusum (Eastern), where as one ACO is responsible to look after BZ and monitoring section at headquarter. These sectors provide administrative and technical support as assigned by the headquarters. The ACOs are supported by Rangers who supervises Range posts and communicate with BZ communities and implement Park activities. The smallest administration unit of the Park is the guard post which is managed by Senior Game Scout or Game Scout and delivers the work assigned by Range post.

Similarly, there is a BZMC to implement BZ program. The BZMC manages the funds received from the park. The CCO serves as member secretary of the BZMC and provides technical support.

### 3.9 Achievements of Preceding Management Plan

This is the first management plan of BaNP. However, an inception plan was developed to establish the Park and guide conservation activities since its establishment. As per the guiding documents, a draft management plan was also prepared. Based upon the guiding document and draft plan, major focus was given in infrastructure development such as office buildings and staff quarters for staff and security personnel in various posts, sectors and headquarter and Hattisar (elephant stable). Within the eight years of Park establishment, altogether 46 buildings (30 for Park and 16 for security unit) have been constructed at strategic locations for park administration, management and security purposes (Annex X). The infrastructure developed in the head quarter includes the office headquarters at Obhari and 4 staff quarters; one training hall, building for park offenders, garage and waiting houses. For the two sectors, 2 sector offices and 2 residential quarters have been built at Kohalpur and Kusum respectively. In Kohalpur sector, one building for BZMC office has also been constructed. Similarly, construction of buildings for range posts, guard posts and elephant stables including shade house have been completed at various locations (Annex X). On the security side, office headquarter has been built at Obhari, adjacent to Park headquarters, including 5 other residential houses. Similarly, the houses for security unit have been built at various locations (Annex X). The infrastructure such as garage, waiting place (gol ghar) have also been constructed. The Headquarters, sector offices, range posts, and guard posts including buildings of security personnel are equipped with furnitures, computers and other required logistics. Similarly, vehicle, motorbikes and bicycles were also procured during the period.

On the infrastructure development for mobility and patrolling, various networks of fire lines including wooden bridges have been constructed. Altogether 145 km fire line has been constructed, since the establishment of the Park, and out of them 66 km road is graveled and remaining 79 km is earthen road (Annex X). Apart from patrolling purpose, the fire lines are also constructed as the access road for Sikta irrigation. These fire lines are repaired and maintained every year. Infrastructure for tourism includes 14 watch towers at various places which include 4 RCC watch towers. The wildlife rescue cage has also been constructed in Khairee khola to keep injured or orphan wildlife.

On the habitat management side, 190 ha of grassland have been developed for prey base species at 15 places which ranges from 5-20 ha and these grasslands are managed every year. The area of these grasslands needs to be increased in the next five-year period. Similarly, 26 wetlands and water holes have been constructed and restored.

BaNP has worked with local communities to form BZ institutions such as BZUGs, BZUCs and BZMC in all the municipalities and rural municipalities of three districts of Banke, Dang and Salyan. The first BZMC has already its tenure and second BZMC is contributing towards participatory biodiversity conservation involving BZ institutions.

In the last five years, the Park invested NRs. 179,750,000 (In Words: One hundred seventy nine million and seven hundred fifty thousand). In the early years of establishment of the Park, the budget was very low as Park office confined its work in exploring appropriate location to establish sector office, range post and guard posts and there were also limited staff. The budget begun to increase from FY 2072/73 as the infrastructure development took place and number of staffs increased. The budget of the Park in the FY 2074/75 was NRs. 82,750,000.00 (Eighty two million seven hundred fifty thousand) and majority of the budget was invested in infrastructure development such as construction of posts, staff quarters, fireline, watch towers and bridges etc.

### **3.10 Strength, Weakness, Opportunity and Threat (SWOT) Analysis**

#### **3.10.1 Strengths**

- Well organized institutional arrangement to implement conservation programmes and security of the Park;
- The Royal Bengal Tiger draws attention of GoN along with global community for its conservation;
- Encouraging partnership with local communities and stakeholders, including national and global conservation organizations; and
- Accessible location of the Park from Kathmandu, Butwal and Nepalgunj and very near to the border of India to attract national and international tourists.

#### **3.10.2 Weakness**

- Insufficient tourism infrastructures such as information centre, ticket counter and entrance gate etc;
- Insufficient field gears and equipment for field staffs;
- Public right of way of forest path for the local people which can be used by poachers also; and
- Very short north-south span and very long east-west stretch of Park makes difficult to withhold wild animals inside the core area.

#### **3.10.3 Opportunities**

- Potential site for the GoN to generate revenue by developing tourism infrastructure for national and international visitors;
- BaNP has been seen as extension of PA nearby BNP and serves as important biological corridor for tigers between Nepal and India;
- Increase income of local people by tourism-based business, enterprises and jobs;
- Maintain good relationship between local people and BaNP authority through people's participation in biodiversity conservation; and
- Undertake various research and studies in collaboration with conservation partners and implement the findings in BaNP and other similar areas.

#### **3.10.4 Threats**

- Collection of gravel sand and boulder on an unsustainable manner is posing threat to biodiversity conservation;
- Couple of transmission lines go through the BaNP which can be detrimental for wildlife if accidents occur;
- The wildlife can be killed in highway while crossing;
- The wildlife can be drowned in the Sikta Irrigation Canal;
- Increasing human-wildlife conflict;
- Habitat loss both by fragmentation and encroachment;
- Poaching and illegal trade of wildlife and its derivative;
- Timber theft and smuggling;
- Possibility of flash flood in the rainy season; and
- Forest fire prone area.



## **Part B**

# **The Proposed Management**



# Vision, Goal and Objectives

## IV CHAPTER

### 4.1 Vision Statement

BaNP and its BZ is visualized as an extended habitat for mega fauna species especially wild tigers in western Terai of Nepal, where local people can live in harmony with nature which eventually contributes to well-being of the local community.

### 4.2 Management Goal

The goal of BaNP and BZ management is to conserve and maintain ecological integrity of the Park that eventually supports to livelihood improvement of the people living in BZ.

### 4.3 Management Objectives

- To protect and conserve biological diversity of the Park with special focus on protected wildlife species;
- To manage and enhance habitat of both predator and prey base species thereby maintaining healthy ecosystem of terai and churia region;
- To promote tourism in the Park and its BZ through tourism infrastructure development and local culture conservation;
- To intensify local communities' engagement in biodiversity conservation through conservation awareness raising, climate adaptation, minimizing human-wildlife conflict and improving social and economic well-being of local people; and
- To strengthen institutional capacity to carry out integrated conservation and development activities through research, training and cooperation among stakeholders.

### 4.4 Major issues and challenges in achieving objectives

#### 4.4.1 Issues

- Natural succession and invasion by woody vegetation leading to limited grasslands;
- Inadequate resources for maintenance of grassland has hindered growth of prey base species;
- Inadequate resources for creation and maintenance of wetlands in relatively dry areas;
- Uncontrolled livestock grazing, encroachment for agriculture land, collection of firewood and timber before the gazettelement of the Park resulting in Churia degradation;
- Uncontrolled grazing, uncontrolled forest fires during dry season and timber smuggling resulting in BZ forest degradation;
- Limited capacity of BZ institutions;
- Haphazard garbage disposal, especially empty plastic water bottles and polythene bags with garbage along the highway;

- Operation of cremation site at Agaiya, haphazard use of firewood for burning dead body and polluting the adjacent Park periphery through plastic bottle and other non-degradable materials; and
- Human-wildlife conflict in the BZ.

#### **4.4.2 Challenges**

- Very short north-south span and very long east-west stretch of Park makes difficult to withhold wild animals inside the core area;
- Road accident killing wildlife while crossing highway from Park to national forest and vice-versa;
- Unsustainable harvest of forest, overgrazing and other climate induced disasters including fire and floods along the Kamdi corridor which lies outside the BZ of the park;
- Sikta irrigation canal has fragmented the corridor in the core and BZ forests also leading to deaths by drowning due to inappropriate design of the ramps;
- BZ resources like sand, gravel boulder, Non Timber Forest Products (NTFPs) and driftwood is yet to be regulated in sustainable manner due to over exploitation; and
- The encroachment problem initiated before the establishment of Park and its BZ particularly is yet to be resolved.

## 5.1 Boundaries

### 5.1.1 Legal

The boundary of BaNP is well defined and duly notified with the publication in Nepal gazette on Ashadh 28, 2067 B.S. (12 July 2010). The area of BZ is also well demarcated on ground with natural landmarks such as rivers, ridges and other land features (Annex V).

### 5.1.2 Administrative

BaNP headed by under-secretary (Tech) level CCO, stationed at the headquarters, and responsible for overall management. The headquarters of the Park has technical, administration and financial sections. As per new organization & management structure, there are 153 approved posts that include position of elephant management as well. Out of the approved position only 129 positions are fulfilled (Annex IX). Administration and finance is operated as per the prevailing government norms, policies and regulation and the CCO is supported by Administration Assistants and Finance Assistant who are deployed by Administration Services and Account and Treasury Control Office respectively. The skills and knowledge of administration and financial staff are enhanced regularly, through various trainings, to deliver the output more effectively and efficiently. Good governance will be maintained from guard posts, range posts, sectors and up to headquarters by making the staff accountable in their duty. Every year, the staffs are appreciated or rewarded for their good performance to promote good administration. Similarly, the staffs are provided uniform, ration and field gears to motivate to deliver good administration services.

### 5.1.3 Ecological

The Park connects KWS and SWS of India through BNP and Kamdi corridor respectively to form larger TCU. The management intervention will focus to restore and maintain corridors for the movement of tigers and wild elephants and other large mammals in larger habitat.

## 5.2 Zonation

Zonation is a ideal management tool that enables the spatial management of a PA to achieve both protection of the area's key ecological features and management of sensitive habitats, alongside sustainable utilization of the area for tourism and other uses. The objective of management zoning system is to maintain different levels of use and protection according to the identified zone to best preserve the values for which the PA is established. Zonation allows managers to achieve different management aims in different parts of the PA. Zoning also provides a framework for planning by designating zones with different management objectives and allowable human impacts. This ensures a balance / trade-off between conservation and development objectives. It allows the planners to focus proposed conservation and development activities and resources on different zones depending on management objectives of specific sites within the PA. The use of this methodology will enhance conservation planning by ensuring effective conservation and development.

Important prime habitats of endangered species especially tiger habitat should be kept undisturbed to increase their population. Although, BaNP has not adopted zoning so far, primary factors in establishing the zonation plan are the need to protect especially fragile and vulnerable habitats and the need to manage and mitigate human impacts. In order to achieve different management objectives in different parts of the Park, four main zone types have been identified.

### **5.2.1 Management Facility Zone**

This is the zone inside Park occupied by the infrastructures developed for administration, security and accommodation for staffs including hattisar. It comprises area occupied by Park headquarters and army offices together with sectors, range posts and guard posts established at strategic locations. This is the zone where administrative facility is provided to the local people, researchers and visitors.

### **5.2.2 Utility Zone**

This is an area of the Park allocated for limited recreational activities for the visitors along with nature interpretation services for conservation awareness. This includes hotels, religious sites, fire line, jungle drive and elephant ride routes, jungle walk routes, and public work installation areas. The main objective of managing this zone is to regulate tourism in the core area by minimizing the disturbance to wildlife and its habitat and to enhance visitors' satisfaction through providing wilderness experience.

It is also the area provided to local people's legal provision for the transportation from the core area. There are mainly four routes as per BaNP regulation 2071.

### **5.2.3 Core Zone**

The area of Park apart from facility zone and utility zone are set out as core area. It is wilderness area which includes all parts of the Park, except for management facility zone and utility zone. The key objective of this zone is protection and maintenance of the natural state of ecosystems and provides suitable habitat for wildlife and to encourage research and science-based management intervention.

### **5.2.4 Buffer Zone**

This is the area surrounding the core area which includes all the BZCFs, settlements and private lands where environment-friendly development activities will be carried out to reduce dependency of people on forest resources and improve livelihood of local people living in the area.

## **5.3 Theme Plans**

### **5.3.1 Park Protection**

#### **5.3.1.1 Status**

Poaching of wildlife for meat, skin, horn etc. are the main threats in BaNP. Unless there is no effective Park protection, any other means of conservation would not make the conservation success.

Park protection is one of the important activities of entire Park management. Nepal Army has been deployed in the protection to enforce NPWC Act, 2029 and subsequent conservation legislation. Park protection has been undertaken by a battalion of Nepal Army at BaNP. The battalion, headed by lieutenant colonel, has its headquarters at Obhari and one company in Chisapani, Kohalpur and Kusum. Similarly, there are 14 security posts at strategic locations to guard and secure the core area (Annex VIII). Some of the security posts are jointly hosted by Park staff for administrative and technical tasks. Staff/Army deployed in these posts patrol their respective areas regularly to ensure that there

are no illegal activities in the core area and BZ of the Park. Patrolling is done either on foot or by using bicycle, motorcycle, vehicle or elephant depending upon situation. Elephant has been one of the important means of transportation used for patrolling to move into the dense forest.

#### **5.3.1.2 Issues**

- The movement of local people using public right of way inside the core area (Annex XII);
- Communication in all the parts of the Park is difficult;
- Patrolling by vehicle is not possible in rainy season due to lack of all-weather road or fire line;
- The infrastructure such as facility of drinking water system and electrification is inadequate; and
- There is insufficient budget for maintenance and repair of electrical and mechanical equipment.

#### **5.3.1.3 Strategies**

- Improve infrastructure for mobility and accommodation in the park in all seasons;
- Patrolling through foot trail, bicycle, elephant, vehicle, real time SMART patrolling to minimize illegal activities using various available physical means;
- Explore and use innovative and advance technology to monitor sensitive areas during high risk periods;
- Establish information collection and purchase mechanisms with local informants;
- Mobilize park staff and army as per situation;
- Establish and strengthen information sharing and reporting mechanisms with key stakeholders including Central Investigation Bureau (CIB), BNP, SWS India, and Divisional Forest Offices and local communities;
- Establish and strengthen communication facilities; and
- Strengthen community based anti-poaching and information gathering mechanisms,

#### **5.3.1.4 Activities**

- Construct 1 wildlife crossing bridge, 1 fly over bridge and 2 underpass at strategic locations, in coordination with Department of Road (DoR), within the 25 km highway to facilitate wildlife movement;
- Install Close Circuit Television (CCTV) cameras in the highway from Obhari to Kusum and undertake regular maintenance;
- Liase with Telecommunication Company to establish communication towers for effective communication;
- Establish radio communication throughout the Park including repair and maintenance;
- Construct 60km fireline just below Churiya from Kusum to Kohalpur;
- Upgrade existing 30 Km of all-weather water otta shield road with the cooperation of construct additional 50 km of all-weather road networks inside the Park;
- Carry out repair and maintenance for 125 km of fire line throughout the year;
- Construct 12 buildings (4 nos. to Park and 8 nos. to security units) at Hattidamar-Salyan, Ambasa, Kyureni, Mahadeva and Balapur to cover gap areas and carry out regular administrative work;
- Construct 2 buildings for Hattisar, 4 shed houses for elephants and 3 grain store house at Dhakeri, Buchapur and Khadkabar;

- Repair and maintenance of Park and security post buildings including accommodation facilities, power supplies;
- Drinking water supply to the posts and security units including maintenance and repair;
- Construct 10 watch towers in sensitive areas including repair and maintenance of existing watch towers;
- Procure food, supplies and equipment required for maintaining elephant management units on a yearly basis;
- Undertake camping, sweeping operation, short-medium-long range patrol to deter poaching and locate leg hold traps of iron set to trap wildlife (especially tiger);
- Establish, strengthen, institutionalize CBAPU (Chisapani, Kohalpur, Bharaiya, Dhakeri, Mahadeva-Shamshergunj, Sikta, Kusum, Rajkot, Nauwasta, Ghuiyabari) and develop a network of CBAPUs;
- Develop a network of CBAPU;
- Establish local informants around sensitive areas;
- Procure 20 night vision binoculars for Park patrolling;
- Procure 100, bicycles, 10 motor bikes including repair and maintenance;
- Procure 1 JCV (heavy equipment vehicle), including repair and maintenance, to construct fire line including repair and maintenance; and
- Procure 2 four-wheel vehicles, including repair and maintenance, for sectors to make effective patrolling and Park management; and
- Procure fuel for motorbikes, JCV and vehicles.

### **5.3.2 Habitat Management**

#### **5.3.2.1 Status**

Effective grassland and wetland management is very important for food and water availability for wild animals. Habitat management is largely dependent on the removal of large number of livestock and the management of grazing pressure for which alternative grazing lands and livestock improvement program in the community areas are important prerequisites. One of the major concerns is that the domestic livestock entering the wildlife core habitat should be controlled with active support of BZ communities and institutions.

Though there are several grasslands in the Park, most of them are degraded as they are invaded by invasive alien species and woody vegetation. Proper maintenance of grass land will help in the increase of prey base for tiger. Some of the degraded wetlands in the area like Tharu bas, Tirtire, Jethi nala, Giddheni Chaur, Jhijhiri Khola, Baghshal Khola, Lute paani, Thuriya Khola, Kaala pani, Khairi Khola, Aghaiya, Rolpali Khola, Bhatte Khola, Bairiya Khola, Oz Khola need to be reclaimed whereas some other wetlands and ponds like Giddheni Chaur, Buchapur, Obhari, Sukai khola, Thuriya khola, Khairi khola, Aghaiya, Gotheri, Bhatte khola, Bairiya need to be maintained. Most of the wetlands dry up in the summer season and therefore proper restoration and maintenance of the wetlands are also very essential for long ranging and migratory wild animals like elephant.

Due to the narrow north-south and long east and west stretch, the habitat in the BZ and national forest are also equally important to provide wildlife as an extended habitat. Apart from this Kamdi corridor, which falls under DFO management, is an important corridor for the movement of wildlife from BaNP to SWS of India due to availability of water which provides breeding ground for several important wildlife species mainly tiger and wild elephant. Recent tiger survey in BaNP revealed tigers moving

towards the corridor forest and with an increase in number tigers are likely to use Kamdi to move between BaNP and SWS.

#### **5.3.2.2 Issues**

- There are inadequate and small patches of grasslands in the Park and they are degraded due to invasion by weeds and woody vegetation;
- The wetlands dry up in the summer season;
- The habitats of churia region is under pressure due to uncontrolled livestock grazing, forest fires, collection of firewood and timber;
- Due to the narrow north-south and long east and west stretch, the habitat inside the Park is not sufficient for wildlife;
- There are problems of forest area encroachment in few areas particularly in the north-eastern part and in some areas of the BZ;
- The Sikta irrigation canal that passes through BZ forests has fragmented the habitat and has drowned many wildlife to death when they fall accidentally into the canal and cannot come up due to improper ramps;
- Fish pass has been designed to maintain aquatic ecosystem in Sikta dam and quite often, this dam has been used to trap the fish by drying one part of the river; and
- Kamdi corridor, which falls under DFO management, is an important corridor for the movement of wildlife from BaNP to SWS of India and this corridor suffers from unsustainable harvesting of forest, encroachment, poaching, overgrazing and other climate induced disasters including fire and flood.

#### **5.3.2.3 Strategies**

- Improve grassland management in the next five years by using appropriate mechanical equipment for canopy opening and elimination of alien invasive species control;
- Enhance understanding and knowledge of grassland and wetland management using geo-information science through collaboration with research and academic institutions;
- Control grazing inside the park and manage livestock pressure in BZ forests;
- Collaborate Livestock Service Office to encourage stall-feeding, replacing unproductive livestock and vaccination against foot and mouth disease;
- Network and collaborate with respective trans-boundary PAs to monitor and manage migratory mega fauna species such as Tigers and Wild elephants; and
- Adopt communication, education and public awareness among local community and stakeholders in participatory biodiversity conservation;

#### **5.3.2.4 Activities**

- Carry out spatial mapping of all the grasslands, wetlands and Alien Invasive Species of both the Park and BZ and carry-out periodic monitoring to support management and decision-making;
- Maintain grasslands and wetlands on annual basis;
- Study distribution and abundance of palatable grass species, recording XY coordinate and conduct regular monitoring of these species;
- Manage grassland by clearing 1000 hectares of woody species;
- Create grassland of 50 m on the both sides of 100 km fire line by cleaning, removing shrubs and

- uprooting trees;
- Clean the shrub up to 10 m on the both sides of 50 km highway to minimize risks of road accidents and kills;
- Carry out regular uprooting, drying and burning of 1000 ha of grassland to produce new flush of palatable and nutritious grasses and to reduce forest fire;
- Removal and control of IAS in an area of 250 hectare in five years;
- Construct 25 additional water holes (RCC or earthen) at water deficient areas;
- Install 10 solar water pumps to recharge water holds;
- Maintenance of wetlands and waterholes by cleaning and removing aquatic weeds;
- Undertake activities to enhance, maintain and restore wetlands including its functions;
- Install solar water pump to recharge water holes; and
- Assess water quality in regular intervals.

### **5.3.3 Fire Management**

#### **5.3.3.1 Status**

BaNP has extremely dry environment due to its geographical position and experiences forest fires which causes incalculable harm in extensive area of the Park every year during the summer. Forest fire creates big threat to wildlife of the Park-especially to reptiles, and small mammals and birds. More than 95% of the fire cases are caused by peoples' carelessness during cooking of meal by timber and fuel wood smugglers or throwing of burning match stick, bidi or cigarette by the local people while walking along the fire line.

For controlling forest fire, Park management has imposed strict prohibition on taking fire-producing items inside the Park, but it is extremely difficult to control as a large number of villagers pass through the fire line.

A network of fire line has been also created in the Park to prevent spreading of fire from one area to another. The fire line needs regular cleaning before the commencement of dry season. The Park also adopts control burning as a management tool every year in spring season (March to May) to prevent forest fire and grassland management. Every Guard post needs a team of manpower consisting of both Park and army staff, which is trained in fire management with fire-fighting equipment.

#### **5.3.3.2 Issues**

- During dry and windy season fire spreads very quickly due to dried grass, fallen leaves and branches as a result wild life panics and cannot flee out quickly for survival;
- There is lack of fire-fighting strategy for fire suppression;
- There is no well-equipped fire- fighting equipment at field level to combat fire incidents;
- There is no systematic data collection regarding the occurrence of fire incidents to analyze the trend for the correction of future course of action;
- The fire lines are not wide enough to cope with surface fire.

### **5.3.3.3 Strategies**

- Develop and maintain the fire line;
- Develop capacity of Park staffs, security personnel, BZCF members and BZ communities to control fire in BaNP and its BZ;
- Increase awareness towards BZ communities about prevention of fire incidents;
- Utilize fire-fighting toolkits very amicably within the Park area; and
- Establish rapid response team by involving local people, Park staff and security personnel for fire fighting in Park headquarters, sector office and other fire prone areas.

### **5.3.3.4 Activities**

- Prepare fire-fighting strategic and management plan and implement it;
- Clear fire line or undertake control burning in the fire lines before the onset of fire season;
- Identify fire prone areas by using satellite imagery analysis or web-based fire mapper;
- Train Park staff and security personnel and BZCF members for fire fighting;
- Provide fire fighting equipment to Park post and BZCFs;
- Mobilize fire-fighting team with equipment in order to stop spreading of fire in grasslands;
- Undertake early burning of grasslands on the basis of burning regime and create firebreaks annually;
- Install forest fire early warning systems;
- Carry out fire prevention education and awareness activities; and
- Establish fire occurrence reporting databases.

## **5.3.4 Wildlife Health Management**

### **5.3.4.1 Status**

It is very difficult to treat free ranging wild animals and control epidemic if disease outbreaks. Domestic cattle are potential carrier of diseases to the wild. In BaNP, many cattle enter for grazing specially in summer season whereas wild animals also move into grasslands and wetlands of BZ and there are interactions between domestic and wildlife populations leading to increased interface. It is important to ensure that chances of transmission of infectious diseases between domestic and wild animals is minimized or eliminated. Hence, health monitoring and surveillance of disease outbreaks should be done regularly. Besides, regular and timely immunization of domestic livestock around the Park against major diseases is needed to prevent disease outbreak. Further, road accidents are also resulting in injuries and deaths of wildlife along the highway.

### **5.3.4.2 Issues**

- Grazing pressure inside the park resulting in higher interaction between wildlife and domestic livestock;
- Increasing pressure of free-ranging livestock in and around the park;
- Wildlife health management inadequately addressed in planning and budgeting;
- Inadequate capacity to monitor and diagnose health issues in the park; and
- Inadequate medical facilities at the park resulting in deaths of injured animals.

### **5.3.4.3 Strategies**

- Develop wildlife health centre and orphanage care facility;
- Formulate a protocol for wildlife health monitoring and disease surveillance;
- Coordinate with Veterinary Offices, and seek their support whenever required; and
- Build capacity of staff to provide effective medical facility to wildlife.

### **5.3.4.4 Activities**

- Establish wildlife orphanage and rescue centre in at least two sectors for emergency treatment;
- Carry out regular check-up of elephant at elephant stable and treat them;
- Treat injured animal upon arrival at orphanage and rescue centre;
- Undertake research and development works towards management of wildlife health;
- Coordinate Livestock Service Office (LSO) and conservation partners to provide vaccine to livestock against potential diseases that can be transferred to wildlife;
- Support to establish a community based veterinary center with materials required in medical emergencies;
- Build capacity of frontline staffs to recognize, record and report disease or poor health condition of animals or plants;
- Train staffs to collect sample of blood, faecal matter, urine or vital organs;
- Report and document mortality of wild animals immediately after it comes to notice of any staff as part of disease surveillance strategy; and
- Coordinate with Livestock Office to undertake post-mortem of deceased endangered wild animals.

### **5.3.5 Encroachment Management**

#### **5.3.5.1 Status**

Despite the strict regulation, forest encroachment is prevalent in the Park. This encroachment occurred prior to establishment of the Park and there are concrete houses already erected in the encroached area. It has become more challenging when it is close to east-west highway. The Park has already compiled a list of encroachers, organized awareness campaigns, and undertaken fencing of encroached area after evacuation followed by plantation.

#### **5.3.5.2 Issues**

- Encroachment has fragmented the habitat and obstructs free movement in biological corridor;
- Encroachers disturb the habitat with illegal fuel wood collection and tree felling;
- Encroachers can be involved in poaching directly or support poachers by providing information about Park patrols; and
- The illegal or informal settlers increases encroachment areas as they grow in numbers taking more land for agriculture and expansion of settlements.

#### **5.3.5.3 Strategies**

- Collaborate with DAO, Nepal Army, BZ communities, Political Parties, Local Non-Governmental Organization (NGOs), conservation partner to evacuate encroachment as per current government policy to control encroachment in more coordinated and effective manner;
- Evacuation and plantation of encroachment of Park and BZ forest; and

- Use information and communication strategy to aware the local people about consequences of encroachment.

#### **5.3.5.4 Activities**

- Spatial mapping of encroached areas and potential hotspots where it can expand;
- Demarcate boundary of Park and Settlement area to discourage encroachment;
- Issue notice to evacuate the encroached area;
- Relocate the legal and illegal settlers residing in Dang and Salyan if they are willing to move outside of the PA by providing skill based training and other livelihood options;
- Form committee to address the issues of illegal settlers as unregistered land and encroachers;
- Support to improve the livelihood of landless, flood victim people who have encroached the Park area for various reasons and evacuate them in win-win situation;
- Fencing, plantation and restoration of evacuated and vulnerable areas; and
- Coordinate with Local Government Authorities to resolve the encroachment problem.

### 6.1 Research Priorities

Research is essential for every PA as it helps to develop database and supports in decision making process. In order to ensure effective management, there should be sufficient information on bio-physical, ecological and socio-cultural aspects of PAs. In addition, it allows scientific management of PA and serves as a tool to solve problems. Thus, research should be oriented towards fulfilling the management needs. Very few researches have been undertaken mainly by students of Tribhuvan University for their M.Sc. thesis in the areas focusing on survey and other aspect of wildlife etc. In order to ensure research results being applied to the conservation and management of wildlife, there is a need to coordinate with various national and international academic and research institutions and researchers. The formation of a separate research unit to lead and coordinate the research activities is essential to synthesize the research results and makes them applicable in Wildlife management.

The status of churia conservation, drying of wetlands, removal and control of IAS, prey base studies and status of corridor connectivity have been top research priorities of BaNP. However, research areas have mostly been determined by the interest of the individual researchers. Therefore, the research will be aligned to the need of BaNP collaborating with different Universities through DNPWC. In addition, more study has to be conducted in habitat suitability in the evacuated settled areas after proper address by GoN, carrying capacity of wildlife population, identifying main causes of increasing death rate of wildlife.

Thus, there is a need to set research priorities for BaNP and BZ. The list of priority activities for research is as follows:

#### Species Conservation

- Update baseline data on flora and fauna;
- Compile all available scientific information on tigers and prey species focusing ecological, methodological and human impacted topics;
- Undertake intensive research on trans boundary movement of tigers and the use of corridors;
- Prepare land use plans for critical habitats of tigers in PA's/BZ and manage them;
- Update digital database maps using latest topo-sheets, satellite imageries and aerial photographs for updating tiger information;
- Identify indicator species to assess habitat condition;
- Study status of Gharial and Mugger crocodile in Rapti river;
- Study of distribution and abundance of various prey base species;
- Conduct studies on the scale, extent and local variations in the intensity of to help in identifying and designing effective mitigation measures;
- Carry out relationship between anthropogenic activities and maintenance of healthy and viable wildlife populations;

- Undertake detailed studies on ungulate-habitat relationships and the feeding behavior of ungulates;
- Carry out study on spatial distribution and abundance of four horned antelope, hyaena and golden monitor lizard; and
- Study ecological processes that affect maintaining healthy wildlife population;

### **Habitat Management**

- Spatial mapping of critical wildlife habitats and areas of high conservation significance;
- Undertake study to assess habitat condition of Kamdi corridor;
- Identify indicator species and monitoring on regular basis to assess habitat condition;
- Prepare land use management plans for critical habitats of tigers in the Park and BZ;
- Study distribution and abundance of palatable grass species;
- Undertake study to identify the succession pattern of grasslands, forests and wetlands;
- Study the effect of IAS to wildlife habitat;
- Collaborate with research institutions and academic institutions to find the appropriate measures for controlling IAS;
- Conduct study on the effect of habitat fragmentation and degradation on wildlife survival;
- Study and document indigenous wetland conservation knowledge, skills and practices;
- Carry out wetlands and grasslands mapping and assess their successional dynamics to inform management prescriptions; and
- Conduct research, monitoring and documentation for facilitating water and land use planning and management.

### **Fire Management**

- Undertake spatial and temporal pattern of fire incidence; and
- Identify fire prone areas by using satellite imagery analysis or web-based fire mapper.

### **Tourism Management**

- Document 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.

### **Climate Change**

- Conduct study of climate change indicators and impact on biodiversity conservation along with identification of adaptation activities;
- Carry out possible impacts of climate change on wildlife population;
- Study the impacts of changes in precipitation and temperatures in the biodiversity of the Park;
- Undertake vulnerability assessment of species and local communities with respect to climate change; and
- Prepare community-based adaptation plans for most vulnerable sections/ areas.

### **Buffer Zone**

- Undertake socio-economic condition of local people in the areas where human-wildlife conflict is high;
- Carry out relationship between anthropogenic activities and maintenance of healthy and viable wildlife populations;
- Conduct study to assess the optimum quantity of sand, gravel and boulder that can be extracted each year; and
- Study to improve the management of cremation site (ghat) to reduce waste at both sides of highway.

### **Institutional Strengthening**

- Review and upgrade reporting and information sharing system;
- Prepare Annual Progress Reports;
- Undertake evaluation of five-year management plan;
- Prepare next five-year management plan including IEE; and
- Undertake study of management effectiveness of the Park.

## **6.2 Monitoring**

Monitoring of wildlife on regular basis is very important for the management of the Park. Regular monitoring of wildlife population with a special focus on endangered and rare species, critical habitats and prey base provides information that is vital for timely planning, response and budgeting to improve overall management of the Park. Therefore, to ensure the conservation of the wildlife, regular monitoring is being conducted by the staff. Keeping these facts in mind, the following key areas for monitoring related to wildlife conservation is proposed:

### **6.2.1 Species Monitoring**

- Monitoring of tiger on periodic basis based on camera trap;
- Monitor tigers around the BZ with local community engagement;
- Monitoring of four horned antelope on periodic basis based on direct count;
- Monitoring of indicator species;
- Monitor prey base species on regular interval;
- Monitoring of small mammals;
- Identification and monitoring of climate sensitive species on a long-term;
- 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;
- Monitor habitat quality using DNPWC-MIS formats for ground verification, data validation and management implications;
- Undertake monitoring of permanent plots, transect lines in forests, grasslands and other habitats;
- Monitor impacts of floods and extended droughts on wildlife habitats;
- Periodic wetlands and water holes monitoring including water quality; and
- Monitor extraction of soil, sand and gravel in coordination with local authority.

### **6.2.3 Fire Monitoring**

- Monitor spatial and temporal pattern of fire incidence; and
- Monitor fire and fuel dynamics.

### **6.2.4 Tourism Impact Monitoring**

- Monitor tourism impact on social, economic and culture; and
- Monitor the contribution of tourism to the poor, women and marginalized community.

## **6.3 Capacity Building**

PA management involves complex issues to be addressed for the sustainability of the biodiversity conservation endeavors. Thus, Park staff should have skills on technical as well as managerial aspects of the PA management. Capacity building can be focused at individual, institutional, and societal levels. Within PA management, capacity-building initiatives often target individual managers and aim to promote professional development through building on existing knowledge and experience and providing new concepts and tools to address contemporary challenges. Such training should be of two categories: (i) training for organizational capacity building, and, (ii) training for specific target group to enhance skill and income. The capacity enhancement of the Community Based Organizations (CBOs) and the BaNP staff is seen as the basis for the effective conservation of wildlife in BaNP. So far, no specialized training packages are being offered to the members of the BZUGs/BZUCs and the BaNP staff in this respect. General training to the members of local CBOs include, book-keeping, leadership, and enterprise planning and management. While specific training to and BaNP staff includes Training of Trainer (TOT), planning, implementation, monitoring and evaluation.

Here, partnership can be sought with national and international conservation partners to develop the capacity. The assessment will be carried about the need at different level and curriculum will be designed. It should promote the sharing of best practice experience among the professional of this sub-continent. Promoting collaborative partnerships and sharing of institutional knowledge to build capacity for effective wildlife conservation remains a point of discussion regarding the best management intervention. The following strategies will be undertaken to build capacity of Park, security and BZ communities

### **Strategies**

- Develop partnership with national and international conservation partners for capacity building;
- Enhance professional development by facilitating increased understanding between the parties and their respective countries;
- Promote cooperation between conservation-oriented research institutions;
- Share benefits of institutional knowledge and accomplishments; and
- Encourage collaborative research and outreach initiatives;

Some of the capacity building activities that are considered important to various BaNP staff are as follows:

### **Park Protection**

- Orientation training to security troops for newly deployed Battalion before deployment in the field;
- Orientation training to frontline staff on legal issues;
- Refreshment trainings to the field staffs and security personnel;
- Basic training to Games Scouts and Rangers to handle Global Positioning System (GPS) equipment, camera, etc.;

- Training on Real-time SMART patrolling to Park staff and security troops;
- Conduct anti-poaching operation trainings to Park staffs and security personnel;
- Conduct crime scene investigation and interrogation trainings to investigators as per legal provision;
- Human rights training to handle the convicted people; and

### **Species Conservation**

- Wildlife management and handling training;
- Conduct training on habitat and population monitoring techniques;
- Training about field techniques, including signs, sound and other indirect evidences of different wildlife species; and
- CITES training.

### **Habitat Management**

- Basic training on vegetation analysis for recording data in monitoring plots; and
- Provides training to the Park staff in wildlife habitat monitoring.

### **Fire management**

- Conduct forest fire management training to the Park staffs, security personnel and BZCF members.

### **Wildlife health management**

- Build capacity of frontline staff to collect sample of blood, fecal matter, urine or vital organs; and
- Build capacity of frontline staff to identify, record and report disease or poor health condition of wildlife;

### **Tourism management**

- Provide trainings to nature guides to enhance their capacity in nature interpretation specifically on wildlife, birds and plants etc.;
- Training on nature interpretation and display management; and
- Organize the nature guide.

### **BZ**

- Social mobilization training;
- Appreciative enquiry training;
- Conflict management training;
- Community-based climate vulnerability assessment and adaptation planning training;
- Organization development and management training;
- Leadership development training; and
- Account keeping training.

### **Institutional Strengthening**

- General and specialized;
- Public administration and management training;
- Planning, monitoring and evaluation training;
- Database management Training to Rangers and Officers; and
- Geographical Information System (GIS) training to Rangers and Officers.

## 7.1 Royal Bengal Tiger

### 7.1.1 Status

Historically, tigers were distributed continuously across the lowland terai forests. Surveys, between 1987 and 1997, documented that only three isolated tiger populations remain in Nepal (Smith et al. 1998). The tiger census of 1995 - 1996, in the PAs of Chitwan, Bardia and Shukla-phanta, estimated tiger populations to be 48-49, 30-32, and 15-16 breeding animals, respectively. Of the three populations, only one in Chitwan was studied in detail.

The status of tiger and their habitat was continually monitored and showed gradual improvement in the quality of habitat. Additional conservation efforts in and around these prioritized areas have resulted in improvement and restoration of habitat quality leading to signs of tiger and prey movements in some of the corridors adjoining the park. Studies were carried out in conflict and biological aspects in tiger and its prey base. Conservation education program along with the landscape approach including community based anti-poaching operation added by poaching control efforts and reduction of Park people relationship has improved overall conservation of tiger. The coordination and collaboration at local, national and trans-boundary level should support trade control and conservation of the tiger. The increasing trends of tiger numbers inside and outside the PAs in Nepal indicates that tiger population in Nepal is gradually recovering in some parts of their former range in response to conservation interventions, which is a step towards TX2 and long-term viability of tiger populations as an iconic and umbrella species. These recovering populations are re-colonizing in a rapidly expanding base of community managed forests (Gurung et al., 2006, Gurung, 2008) and BZ management activities. The tiger count of 2013 found 4 tigers in BaNP.

### 7.1.2 Significance

In the early 1990s, it became evident that medicinal trade in Tiger bone threatened to drive the already endangered Tiger to extinction in the wild. Nearly every part of the Tiger body has a value. It is believed that at least one tiger is killed daily for its use in traditional Chinese medicine. An increased demand for endangered tiger parts exists throughout the world. The rising demand for tiger parts and rapid increase in price of tiger bone continues to be an irresistible incentive to poachers. Poaching and smuggling of tiger parts are interrelated cases.

Nepal is a transit country for the illegal trade between India and China, and also a country of origin of tiger parts. Lowland areas such as Baghsal Khola, Jijhari Khola, Khairi Khola, and Sukhar Khola area are important tiger habitats.

### 7.1.3 Conservation History

Nepal's global commitments for tiger conservation have been much reflected in various national and international programs including the Global Tiger Forum, CITES, Convention on Biological Diversity (CBD) and other conservation programs. Nepal successfully implemented first Tiger Conservation Action Plan (TCAP) 1999 followed by TCAP 2008-2012. Similarly, the implementation of TCAP

2016-2020 is underway. BaNP has been considered one of the important activities of TCAPs. The Terai Arc Landscape (TAL) has been selected as one of the ten field learning sites for the PAs Learning Network (PALNet). In fact, the fundamental concept of TAL was strategically adopted at the WWF Global Tiger Conservation Strategy Workshop held in Anyer, Indonesia in September 2000.

The other conservation efforts that have eventually become favorable for tiger conservation are the successful community forests and sustainable livelihoods in the lowlands. A network of village-rangers was successfully established for mapping the meta-population structure of tigers throughout Nepal (Gurung, B. 2002). There is a growing interest among the youths in conservation of tiger and other wildlife. Some youth groups have carried out research works, habitats maintenance and even anti-poaching operations. These self-emerged groups have become change agents in the local communities through their public awareness campaigns for saving tigers.

#### **7.1.4 Issues**

- Inadequate knowledge on tiger ecology including carrying capacity, predator-prey relations, demographic patterns and population dynamics, particularly in BaNP;
- Increasing climate variabilities resulting in drying up of wetlands;
- Decrease and degradation of available grasslands;
- Increase in use of poisons, home-made explosives etc. to kill ungulates in agricultural landscapes outside core areas;
- The illegal entry of local people for (fire wood, fodder, grass, etc.) disturbs the free movement of ungulates and ultimately to tiger as well;
- The expanding physical infrastructures (canal systems, high-tension electrical lines, highways, settlements etc.) including traditional right of way are the major barriers against the dispersal, gene flow among tiger populations and fragmenting intact habitat;
- Although the number of poaching incidents was found to be comparatively low in the Park, the volume of tiger parts seizure was comparatively high and since all parts of tiger are consumed in various possible forms of medicines, poachers may collect almost everything of their 'kill' leaving virtually no evidences for the Park authority; and
- Illegal trade in wildlife products has been possible due to various reasons such as porous boundary between Nepal and its neighbors, less informed custom officials on the wildlife products.

#### **7.1.5 Strategies**

- Improve and restore critical tiger and prey base habitat with a focus on grasslands and wetlands ;
- Enhance understanding and knowledge on tigers and its prey base through collaborative efforts with academic/conservation institutions;
- Engage local communities (CBOs, NGOs, BZCF and other forest management regimes) in tiger conservation through livelihood improvement and human tiger conflict mitigation;
- Strengthen institutional network and coordination for CITES enforcement to control illegal trade in wildlife and its derivatives with special reference to tiger body parts;
- Strengthen anti-poaching efforts in and around the PAs through collaboration with and mobilization of enforcement agencies, stakeholders and local communities including community-based anti-poaching mechanisms;
- Strengthen trans-boundary cooperation at the central and field levels to complement the efforts of controlling poaching of wildlife and smuggling of wildlife body parts; and
- Develop information, education and communication strategy to address issues of poaching, road accidents and tiger-human conflicts.

### 7.1.6 Activities

- Compile all available scientific information on tigers and prey species focusing ecological, methodological and human impacted topics that have management relevance;
- Conduct study and research on tigers and its prey species by collaborating with national and international Universities;
- Restore, maintain and manage degraded forests, vegetation in the biological corridors (BZ/national forests and CFs outside PA) by artificial or natural regeneration for safe dispersal of tigers;
- Restore, maintain and manage degraded wetlands and water holds in the biological corridors by uprooting and cleaning of weeds to maintain a healthy population of tiger and prey species;
- Evacuate and restore encroachments in biological corridors within and outside of BZ;
- Undertake tiger count in every five years using camera trap;
- Erect signages of warning to the passersby in the major rights of ways, resource collection sites and shrines;
- Manage human- tiger conflict and address issues of ‘man-eater’ tiger immediately when informed;
- Update digital database maps using latest topo sheets, satellite imageries and aerial photographs for updating tiger information;
- Prepare land use plans for critical habitats of tigers outside PA and manage them on the basis of land use plans; and
- Conduct awareness campaigns.

## 7.2 Four-horned Antelope (*Tetracerus quadricornis*)

### 7.2.1 Status

The four-horned antelope (*Tetracerus quadricornis*), or chauka, is a small antelope found in India and Nepal. This antelope has four horns, which distinguishes it from most other bovids, which have two horns. Slender with thin legs and a short tail, the four-horned antelope has a yellowish brown to reddish coat. One pair of horns is located between the ears, and the other on the forehead. The posterior horns are always longer than the anterior horns, which might be mere fur-covered studs. The four-horned antelope is diurnal (active mainly during the day). Though solitary by nature, four-horned antelopes may form loose groups of three to five –with one or more adults, sometimes accompanied by juveniles.

The Four-horned Antelope inhabits tropical and subtropical habitats, dry deciduous forests, dry Sal forests and grasslands. The Four-horned Antelope is a browser and mainly feeds on grasses, herbs, shrubs, foliage, flowers and fruits. It needs to drink water frequently; as such it stays in places near water sources. The breeding behaviour of the four-horned antelope has not been well studied. The age at which they reach sexual maturity and the season when mating occurs have not been understood well.

Four-horned antelope are mainly distributed in south-western part of the Park. Recent study has estimated a minimum population of  $191 \pm 45$  individuals in the Park which could probably be the largest population in Nepal (Dahal and Kandel 2013). The research has also identified that the grasslands and Sal forest with woody vine Bhorla (*Bauhinia vahlii*) are major habitats of Four-horned antelope.

### 7.2.2 Significance

The four-horned antelope is the sole member of the genus *Tetracerus*, and is placed under the family Bovidae. The species was first described by French zoologist Henri Marie Ducrotay de

Blainville in 1816. The four-horned antelope has only one other relative in the tribe Boselaphini, the Nilgai (*Boselaphus tragocamelus*).

The four-horned antelope is a protected species of Nepal and listed in CITES Appendix III by International Union for Conservation of Nature and Natural Resources (IUCN). Furthermore this species is one of the least known mammalian species in Nepal and as such its management is largely hampered by lack of basic information on this species.

### **7.2.3 Conservation Efforts**

The current population of Four-horned Antelope in Nepal is unknown but likely to be less than 2,500 individuals distributed in BNP, Chitwan National Park (CNP) and Parsa National Park (DNPWC 2011). This species may be restricted to the Churia range in BNP and areas around Banswari Khola and one of the objectives of BaNP is to protect this unique animal together with tiger.

### **7.2.4 Issues**

The four-horned antelope is threatened by the loss of its natural habitat due to agricultural expansion. Moreover, the unusual four-horned skull and the horns have been a popular target for trophy hunters. There is insufficient information available to make an accurate assessment of the extinction risk of this species in Nepal.

### **7.2.5 Strategies**

- Enhance understanding and knowledge about this less known species through studies and assessments;
- Increase awareness towards conservation of four horn antelope;
- Manage habitats through encroachment control and wetland restoration as the species needs to drink frequently; and
- Collaborate with conservation partner to protect antelope.

### **7.2.6 Activities**

- Undertake study regarding various aspects of four horned antelope;
- Prepare four horned antelope conservation action plan;
- Disseminate importance of four horned antelope conservation in the community;
- Carry out spatial distribution and abundance study of four horned antelope; and
- Construct water holes for four horned antelope.

## **7.3 Small mammals, birds, reptile, fish, amphibians, insects and other animals**

### **7.3.1 Activities**

- Update status of Flora and Fauna of BaNP;
- Translocate Black buck in BaNP;
- Release gharial in Rapti river;
- Introduce mashir fish, tortor in Rapti and Babai river in cooperation with Rampur Campus;
- Provide support to problem animal, injured wildlife and orphan wild animal management practices that including provision of food and treatment;

- Construction of wildlife guiding fence in the sixta canal constructed by Sikta Irrigation Project;
- Construction of appropriate stairs or ramps in regular places of Sikta Irrigation Canal;
- Vaccinate domestic animal in collaboration with Livestock Service Office to reduce communicable diseases;
- Collaborate with Livestock Service Office and introduce hybrid animal (goat, bull and buffalo) and replace unproductive livestock;
- Promote stall feeding to reduce grazing pressure;
- Promote fodder tree plantation in private land of BZ;
- Erect signages of warning to the passersby in the major rights of ways, resource collection sites and shrines;
- Erect the informative hoarding boards in the highways to reduce animal hit;
- Monitoring of vehicle by operating time card system;
- Use of radar gun to check speed;
- Random travelling in the bus to check the speed;
- Procure 10 bird watching binoculars;
- Procure 30 digital cameras to take pictures of wildlife and bird;
- Procure 10 GPS for sectors and Range posts; and
- Procure 10 Laptop Computers for all Rangers.

## 8.1 Background

### 8.1.1 Tourism Scenario

BaNP was established in 2010 and has not been a major tourist destination yet. To promote tourism in relatively newly established Park, focus should be given in conserving the environment together with wildlife population, enhancing the livelihood of resident community, and improving tourism products and services. Tourism development is vital to generate resources for conservation and for socioeconomic development of the region. There is opportunity to experience nature tourism for visitors but there are very few tourism developments taking place due to lack of infrastructure and the systems for managing tourism which is not sufficient enough to contribute towards income generation of local people. At present, tourism development in the Park is in initial stage (Figure 9).

Due to the small size of the Park, future tourism facilities and infrastructure development will have to be developed outside of core Area. Most of the permanent tourism infrastructure such as lodges will be developed in the BZ. Land requirements for such developments will have to be provided by Municipalities Rural Municipalities outside the Park. Similarly, Park will also explore private investors to operate lodge, hotel and homestay and for this they can also acquire land from individual land-owners on the willing-buyer-willing-seller basis. Similarly, tourism operators related with tour guide, elephant safari, jeep drive, boating, cultural show, museum related to local culture etc. will also be promoted. Some special events to attract visitors will be carried out with the participation of local community.

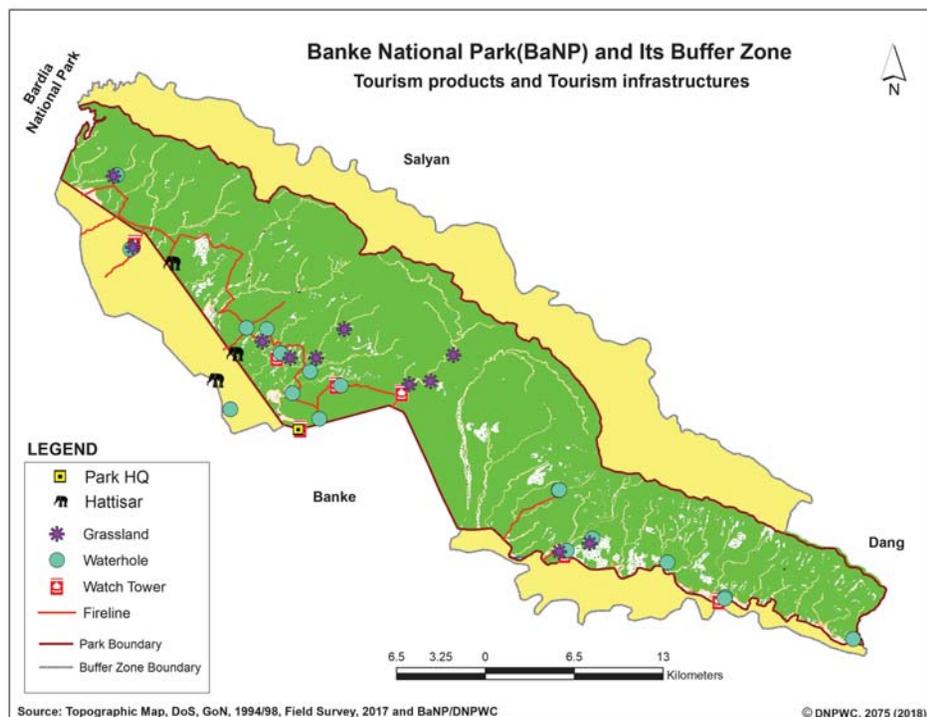


Figure 9: Potential tourism site

## 8.1. 2 Tourism Infrastructure

### Roads

BaNP headquarters is on the highway which is around 20 Km east of Kohalpur. There is 180 Km of fire line which is built to break the fire from spreading and it is also used as access road (Figure 10). At present their condition is not good and cannot be operated during rainy season so tourist activity has not been initiated. More fire lines inside BaNP should be constructed for monitoring purpose which will also be used for regulated tourism. Similarly, access road as circular ring road just outside of the boundary should also be constructed for the use by local people and tourism purpose.

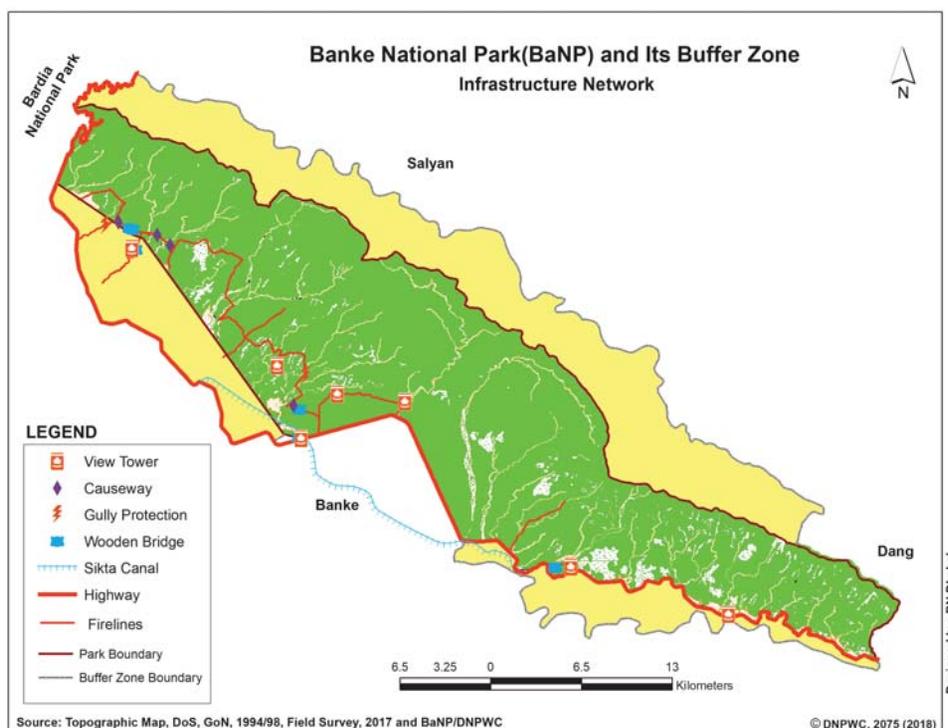


Figure 10: Infrastructure networks in BaNP

### Transportation

The Park can be reached both by bus and by air from Kathmandu. It is about 12 to 14 hours drive from Kathmandu. By air, it is about one hour flight from Kathmandu to Nepalgunj (Ranjha airport) and about half an hour drive to Kohalpur, the Park western sector office Kohalpur and it takes further 30 minutes to Park headquarters from there.

### Telecommunications

BaNP can be connected by both Public Switched Telephone Network (PSTN) and mobile network of Nepal Telecom and Ncell. The mobile coverage in BaNP is satisfactory while internet facilities are also available.

### Services

#### Accommodation and Meals

There are hotels in Nepalgunj and Kohalpur but in the periphery of BaNP except for four homestays to provide accommodation and food. More tourism operators should be encouraged to construct and run hotel outside of BaNP.

## **Shopping**

At present there is no specific outlet where visitors can buy souvenir or local handicraft items nearby BaNP. However, there are shops in Nepalgunj, which is 35 kms away from BaNP, where visitors can buy some local items. Few local people will be encouraged to operate shop in the surrounding area of the Park where visitors can buy some souvenirs and local crafts.

## **Banks/ Currency Exchange**

There are several branches of banks in Kohalpur and Nepalgunj and at least one bank will be contacted to operate ATM service nearby Obhari, Park headquarter. Recently, Western Development Bank, Jyoti Development Bank and Himalayan Bank have initiated their service from Zero Bazar, nearby Park's headquarters. Similarly Bhargav Development Bank has conducted the Banking services from Aghaiya, 20km east from park headquarter.

## **Medical Services**

There is good facility of medical services in the BaNP area. There are hospitals and clinics in Kohalpur and Nepalgunj and there are health posts in rural municipalities. Highway clinic and snake bite treatment center is in operation in front of the park headquarters. However, medical facility is poor in the BZ of Dang and Salyan due to remoteness.

### **8.1.3 Interpretation Facilities**

Interpretation is the most powerful communication process for any visitor that is available to communicate its message(s) to visitors. In fact, it provides an "added value" to the total visit. Interpretation facilities provide the visitors information on natural and cultural landscapes, sites, features, objects, people, events and stories of the area including potential tourism product for visitors to be engaged and do's and don'ts inside the Park and BZ area. The BaNP has no interpretation facilities and requires good interpretative plan for the long-term tourism success. BaNP has planned to establish one multipurpose Visitor Information Centre (VIC) at Obhari where there will be ticket counter, display centre providing information, video documentary showing hall, museum, souvenir shop, restaurant and rest rooms. In addition to this two VIC will be established in Kohalpur and Kusum to provide first-hand information of the Park. In all the ticket counter, minimum information providing display boards will also be placed so that visitor will get basic information. Besides this, information on BaNP will also be provided in the VIC of Bardia National Park (BNP) and Krishnasaar Conservation Area (KrCA) to promote conservation circuits. Similarly, display boards marketing tourism products of BaNP will be placed in Nepalgunj and Bhairahawa airport. In addition to the VIC, seven entry gates for visitors will also be constructed in Shiva khola, Kusum, Sikta, Dhakeri, Chisapani, Sutaiya and Khadkabar.

### **8.1.4 Issues**

- There are inadequate tourism infrastructures such as VIC, raised platform in Hattisar, fire-lines and watch tower required to promote tourism in this newly established Park;
- Local private entrepreneurs have not been attracted to invest in tourism business;
- The facilities and services with regards to food and accommodation for the visitors except for Kohalpur are poor;
- There are no interpretation facilities in the Park;
- There are limited facilities and arrangements for visitors for jungle walk, elephant safari, jeep safari;
- There are no nature guides to help visitors in the Park;

## **8.2 Tourism Management**

### **8.2.1 Strategies**

- Develop tourism infrastructures in the Park around Agaiya, Dhakeri, Khadkabar, Gavar Valley, Balapur and Buchapur in collaboration with local bodies;
- Promote private entrepreneurs by providing conducive environment to operate eco-friendly tourism packages, such as elephant safari, jeep safari, jungle walk, cultural activities and bird watching;
- Diversify tourism products and market through national and international tourism operators, media, seminar, and other means; and
- Collaborate with BNP and KrCA to attract tourists for longer nature tourist circuits and routes;

### **8.2.2 Institutional Setup**

BaNP will take lead role encouraging institutions like private investor or community organization to develop tourism to operate hotel for food and accommodation, tour guide operators, elephant safari operators, transport service to operate jeep drive, travel agents to operate bus from Nepalgunj to Obhari, community organization to perform culture show, banks and health service.

### **8.2.3 Impact Minimization**

With the increase of tourism activities increase in and around BaNP, there will be increase in noise around the habitats, solid waste and possible damage to vegetation inside the park including negative influence on culture of BZ communities. BaNP will work with concerned institutions to ensure that any negative impacts of tourism are mitigated. The negative impacts in the Park and BZ can mainly be noise pollution that can drive wildlife from one place to another. Similarly, traffic congestion en route from Nepalgunj to Aghaiya and inside BaNP can also affect wildlife movement between Park and national forest. There may also be an impact on local traditions, culture, arts and crafts. Through various management and monitoring measures a site should manage and guide the development of tourism so that it has positive impacts on local livelihoods without deteriorating nature and culture.

### **8.2.4 Tourism Product Diversification**

Tourism development at BaNP is ongoing as various tourism products have been identified and infrastructure construction is underway. BaNP will work closely with BNP and KrCA to diversify the tourism products in such a way that tourists visiting BNP and KrCA also visit BaNP. It will be done by providing information of BaNP in the VIC of BNP and KrCA. Similarly, tourism operators of BNP will also be encouraged to make some round-trip tourism activities.

### **8.2.5 Nature Interpretation**

Through nature interpretation, we can pass on knowledge about nature and the relationships within it to promote in-depth understanding and insight, respect and consideration for natural and cultural environment of the park and BZ. Therefore, nature interpretation will be conducted through brochures, display boards, and various audio-visuals methods to communicate information and messages about wildlife and culture of the area

### **8.2.6 Activities**

- Construct and operate seven entry gates for visitors in Shiva khola, Kusum, Sikta, Dhakeri, Chisapani, Sutaiya and Khadkabar;

- Construct multipurpose VICs at Kohalpur and Obhari that includes ticket counter, display centre, museum, documentary showing hall, souvenir shop, refreshment centre, and rest room;
- Place display boards with information on tourist destination areas and tourism products of BaNP in Bhairahawa and Nepalgunj Airport;
- Place display boards in the VICs of BNP and KrCA to attract visitors in BaNP;
- Construct, maintain and repair concrete or wooden watch towers at appropriate locations near grasslands and waterholes;
- Erect hoarding boards informing Do's and Don'ts in the Park and BZ for the visitors;
- Place signage at appropriate location in the Park to show direction to the visitors;
- Construct raised platforms to climb for elephant safari, at least, in two places;
- Construct cultural house and museums in the BZ;
- Support BZ community to operate community lodges and homestays in the tourist hubs of the BZ especially in Gavar valley, Balapur and Buchapur;
- Undertake study of elephant safari route and provide elephant safari service to the visitors;
- Undertake study to finalize jeep safari routes and provide route permit and license to operate jeep safari;
- Place advertisement boards of elephant and jeep safari in the Park;
- Prepare Video Spot to promote tourism in BaNP;
- Advertise tourism products in the Park through Television, Radio and FM radio at national and local level;
- Organize meetings and training to promote local entrepreneur and nature guide to operate jeep safari and other facilities in the Park;
- Organize Clean-up campaigns to manage waste along the highway (waste collection and disposal);
- Conduct nature guide trainings to local and interested individuals giving priority to indigenous and marginalized communities and youths;
- Enhance capacity of nature guides in nature interpretation specifically on wildlife, birds, plants through trainings and some experience sharing activities;
- Conduct home-stay, house-keeping and cook trainings at Aghaiya, Dhakeri, Khadkabar, Gavar valley, Balapur and Buchapur;
- Organize cottage and small business development and management training;
- Provide support to journalists to visit BaNP and publish article;
- Publish news and article in newspaper; and
- Production of video documentary.

## 9.1 Climate Change Adaptation

### 9.1.1 Context

Nepal's National Adaptation Plan of Action (NAPA) predicts warmer winter temperatures and increased winter and monsoon precipitation in the country (MoE 2010). Given these predicted trends yet high degree of uncertainty over timing of erratic rainfall and extended dry spells and their socio-ecological consequences, it is important to integrate un/expected impacts into PA management plans and strategies with a focus on BZ communities and their livelihoods. Considering the proximity of this Park and its BZ into two major rivers systems of Rapti and Babai while also being a region which is relatively dry as compared to western Terai, this area is vulnerable to flooding and drought. Since the uncertainties associated with paths of climate change is highly unpredictable, the plans should be adaptive and include 'no-regrets' strategies that will have conservation benefits even if events associated with climate change do not occur as shown by the general trends.

Climate change will 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 while wetlands and grasslands which are already showing signs of degradation highly associated with extended dry spells need additional interventions for broader ecosystem and PA management. Further, couple of grasslands such as Gotheri and Thuriya has also been reduced due to riverbank erosion. 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. Therefore, any corridors such as the Kamdi corridor identified for wildlife movement or connecting water and food sources (such as leading to Rapti River).

The participatory vulnerability assessment identified wards 1 and 7 of Babai, ward 7 of Kalimati and ward 1 of Dangisaran Rural municipality as the most vulnerable parts of the BZ mainly due to their additional exposure to flashfloods and landslides though flooding and inundation highly probable along the Rapti and Babai Rivers. Similarly, wards 8 and 9 of Rapti Sonari and wards 12 and 13 of Kohalpur municipality are vulnerable to flooding as these areas lie along the river and streams. Further, as the communities largely rely on farming and livestock rearing in the area, extension of services in relation to these sub-sectors is vital to enhance adaptive capacity as emphasized during the participatory assessment.

### 9.1.2 Issues

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

- The rising of temperature during the summer and extended dry spells causes drying up of wetlands as an immediate effect causing wider movement of wild animals which could drive the animals to unsafe areas;
- Prolonged dry spells leading to higher risk of forest fires;

- The dry spells and untimely rainfall is also believed to be reason of emergence of weeds and invasion of alien species in grasslands of the Park;
- Floods and river cutting also destroying forest and grassland area in the Park and BZ and increasing the risk of encroachment in forest areas;
- Disastrous effects on human lives, properties and livelihoods and wildlife population with flooding resulting from incessant rain; and
- Flooding and inundation also damages access roads, fire lines and infrastructure of the Park and BZ.

### **9.1.3 Strategies**

- Enhance knowledge and understanding regarding climate change impacts on species, ecosystems and local communities in the Park through assessments;
- Improve ecosystem resilience through management of climate induced stresses mainly extended dry spells;
- Strengthen Community based disaster risk management and climate adaptation;
- Promote climate resilient livelihood diversification;
- Enhance the capacity of Park staffs, Security persons, and BZ communities to cope with the climate change impacts through capacity building, exposure and orientations; and
- Coordinate and collaborate with key stakeholders and line agencies to mitigate impacts of climate induced disasters and change specially in case of infrastructures such as culverts, bridges and access roads in the BZ.

### **9.1.4 Activities**

- Conduct participatory vulnerability assessments to identify the most vulnerable regions and communities;
- Provide support to prepare Local Adaptation Plan of Action for all the municipalities and rural municipalities of BZ while prioritizing Rapti Sonari and Babai to start with;
- Form community-based disaster management committee and link them with climate change and adaptation related institutions to tackle climate-related effects;
- Conduct trainings to enhance the capacity of Park Staffs, security persons, and BZ communities to cope with the climate change impacts;
- Pilot early warning system of flash flood in the flood prone areas;
- Construct waterholes in the dry Bhavar region and arrange for permanent water holding either through natural or artificial water recharge;
- Create, maintain and expand wetlands and implement water harvesting and regulation mechanisms using available technologies;
- Manage grasslands through uprooting weeds by both manual and mechanical including burning where required;
- Prioritize preventive measures to minimize fire risks to wildlife by creating and maintaining fire lines as well as awareness programmes;
- Prepare forest fire management plan and integrate forest fire control in the of BZCF operation plan;
- Implement community-based forest fire management;
- Conserve churia region to control sediment flow in the downstream;

- Plant fine wood species in the BZ to maintain the balance between fine wood demand and supply for the house hold of local people;
- Scale up biomass and energy efficient technologies such as Improved Cook Stove (ICS) and Biogas to reduce fuel wood consumption;
- Manage and monitor collection of sand, gravel and boulder from the river in sustainable manner;
- Periodic repair, maintenance and upgrading of PA posts, access roads and fire lines in the park to reduce impacts of flooding, landslides and inundation;
- Periodic repair and maintenance of community infrastructures such as Jorhatte irrigation canal and Obhari irrigation canal;
- Divert Bhakta Khola to Rimna Khola to protect settlement and agricultural land from floods and inundation;
- Construct embankment, spur or any soil conservation measure in various rivers and streams to protect park infrastructures, human settlements and wildlife habitats from flood specially around Park head quarter, Paruwa Khola, Rapti River, Duduwa Khola, Babai river banks, Jhijari, Jethinala and Gaukholi; and
- Facilitate market linkages and voluntary carbon financing.

## **9.2 Solid Waste management in BaNP**

### **9.2.1 Context**

Most of the solid waste generated in and around BaNP is composed of organic matter, paper, and minor reused waste that are mainly reused for cattle feeding and manure, while disposal of other non-degradable categories of collected waste (glass, metal, and plastic) is not properly managed. Particularly, burning in open dumps poses a great hazard to environmental, human, and animal health. Similarly, dump sites close to water courses contaminates polluting river.

The pollution problem is now no longer confined to solid waste. Water sources along the major trails are being contaminated from improper affluent discharge, human waste, and garbage dumping. Sewerage and toilet waste can be found piped into nearby streams and rivers. The BZ will 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 on reducing waste generation and proper disposal systems.

### **9.2.2 Issues**

- Inadequate knowledge on proper disposal and recycling of the solid waste in local communities;
- Inadequacy of coordinated effort to address the issue of garbage and pollution management in highway sides of BaNP;
- Lack of guidelines for properly managing the garbage;
- 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;
- Mobilize eco-clubs to raise awareness about importance of solid waste management;
- Work with local government, communities, private sector, and conservation partners to implement sanitation programme;

- Use high tech solid waste management techniques in collaboration with local government;
- Promote recycle/reuse, reduce, remove, and reject (4R) approach to manage wastes in the Park.

#### **9.2.4 Activities**

- Provide support to manage garbage with special focus on reducing production, recycling, and destruction by prohibiting the use of polluting items such as plastic bags;
- Support to develop proper sanitation infrastructures including drainage, toilets, collection and recycling systems;
- Construct a Demonstration center on garbage management in order to demonstrate proper techniques of garbage disposal and recycling techniques to stakeholders;
- Prepare a common sanitation guideline to make them adopt minimum sanitation standards for hotel, lodge, homestay and restaurant in managing clean front yard, toilet with leak proof septic tanks and waste water soakage pits; and
- Construct new cremation site.

## 10.1 Background

In order to ensure people's participation in biodiversity conservation, the fourth amendment of the NPWC Act, 2029 brought the concept of BZ management in 1993. This amendment not only made a provision for designating BZs around Parks/or Reserves but also for sharing Park Reserve revenues for community development and to improve natural resource management. The BZ provide local community with facility for use and the regular supply of forest products to the local people along with community development, income generation and conservation awareness program to solicit participatory conservation minimizing human wildlife conflicts. BZ is an area surrounding a Park or a Reserve encompassing forests, agricultural lands, settlements, village open spaces and any other land use.

The Buffer Zone Management Regulation 2052 (1996) have clearly spelled out the criteria for designing BZs; requirements for management plans and BZUCs' operation plans; and provisions for community, religious, private, and BZ forests. The rules strictly restrict the sales and distribution of timber and firewood from community forests out of BZs unless the demands of the BZ community have been fulfilled. In addition, it mentions the institutionalization of community-based organizations and allocation of funds and provides guidelines for planning and prioritizing programmes to be implemented in the BZ. The organization of the BZ has been designed as BZUGs at the settlement level, which give rise to BZUC. The BZUCs then elects an apex body BZMC.

The Buffer Zone Management Guidelines 2056 (1999) have further simplified the provisions given in the rules to facilitate smooth implementation. The guidelines have made provisions for formation of BZUGs at settlement level and have fixed a ceiling to a percentage of the budget allocated for conservation (30%), community development (30%), income generation activities (20%), conservation education (10%), and administrative costs (10%).

The BZUCs prepare five-year plans by compiling the needs and aspirations of the BZUGs. These plans are then compiled to prepare a BZ plan which forms the basis for using the BZ fund received from Park Revenue. The activities are implemented by BZUGs and BZUCs. Public auditing; participation is the backbone of success. BZUCs ensure coordination and organize all the partners working in their area according to the BZ regulations and guidelines.

The CCO is the member secretary of the BZMC and facilitates the flow of funds from the centre to users ensuring that the fund is used as per the norms. The BZMC, BZUCs, and BZUGs hold meeting as per their needs. The BZMC acts mostly on policy and decisions and the BZUC is a bridge between BZMC and BZUGs. Conservation partners working in the field also collaborate with the BZ institutions to make the programme more effective.

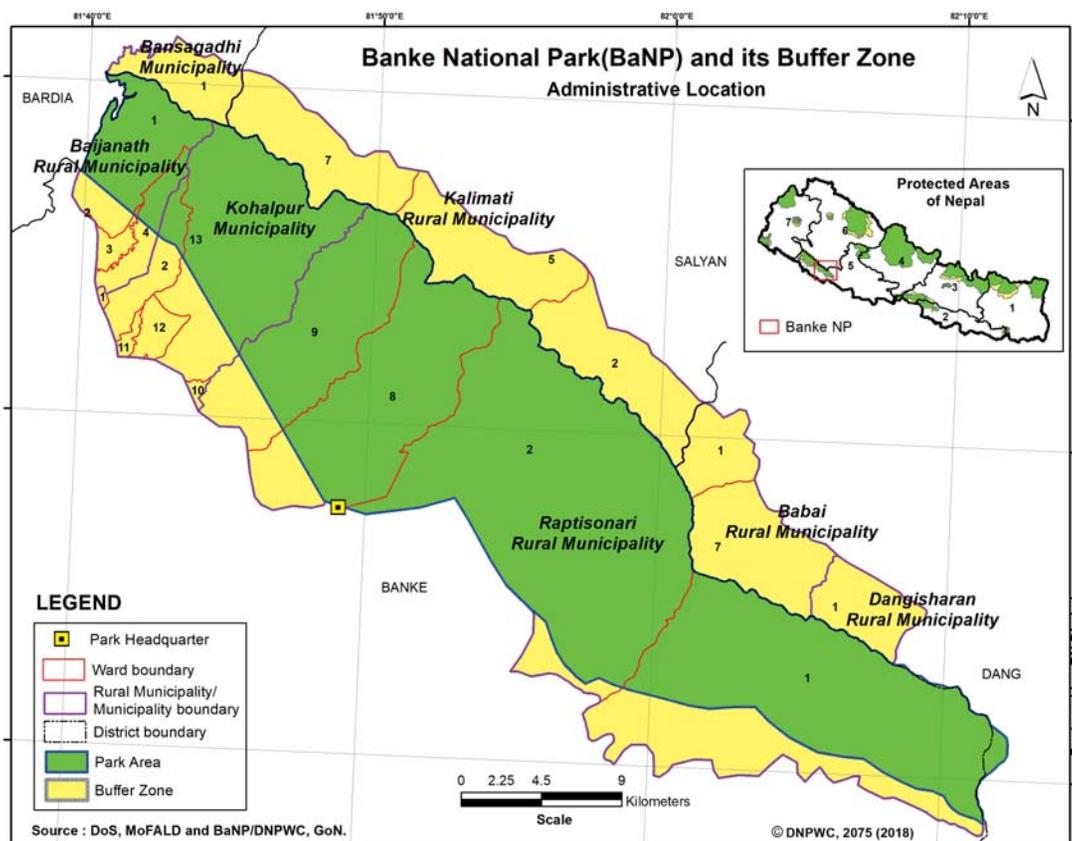
## 10.2 Introduction

The BZ of the Park includes parts of Kohalpur municipality and two rural municipalities of Banke district (Table 3). Similarly, the northern part of BZ occupies parts of two rural municipalities of Dang and one rural municipality of Salyan (Figure 11).

**Table 3: Rural Municipality and Municipality in BZ**

S.N.	District	Municipality/Rural Municipality	Remarks
1	Banke	i) Baijanath Rural Municipality ( previous Naubasta and Chisapani VDCs), ii) Kohalpur Municipality ( previous Naubasta VDC and Kohalpur Municipality) and iii) Rapti Sonari Rural Municipality (previous Mahadevpuri, Khas-Kushma and Kachanapur VDCs)	3 local government
2	Dang	i) Dangisharan Rural Municipality (previous Goltakuri VDC) and ii) Babai Rural Municipality (previous Panchakule and Purandhara VDCs)	2 local government
3	Salyan	Kalimati Rura municipality (previous Kalimati Rampur, Kalimati Kalche, Kapre Chaur VDCs)	1 local government

The BZ is divided into Kusum and Kohalpur Sectors. There are 77 BZUGs, 9 BZUCs and 1 BZMC has been formed according to the Buffer Zone Management Rules 2052 and Buffer Zone Management Guideline 2056. BZMC channels up to 50% of revenue that has been redirected to BZ management.



**Figure 11: Administrative map of BaNP and its BZ**

The major BZ programs include conservation, community development, income generation and skill development, conservation education and institutional strengthening and administration.

A number of organizations also work in the BZ which includes I/NGOs viz. World Wildlife Fund (WWF) Nepal, National Trust of Nature Conservation (NTNC) and Zoological Society of London (ZSL) and local organizations (i.e. BZCFs, saving groups, cooperatives, small farmers' groups, etc.).

## 10.3 Past and Present Management Practices

### 10.3.1 Forest Management

BZ comprises forest, agriculture land, settlement, village open spaces and any other land use. Forest in the BZ is very important as it is considered as corridor and connectivity areas between wildlife habitats. Further, the inhabitants surrounding such areas (the impact zone communities) have certain anticipated roles and responsibilities for conservation and management. It, therefore, implies for special policy and legal ground to support the management of these forests and livelihood improvement of surrounding communities. The present generalized community forestry and other participatory management systems are not enough to support in this dimension. It has been practically seen that the interventions are well beyond the approved community forestry guidelines which are more focused on management of forests for the supply of forest products.

The forests in the BZ are handed over to the community as a BZCF after they submit application to CCO to manage the forest to cater their needs of forest product so that they do not need to enter into the Park. The community people are provided technical support to prepare BZCF constitution and Operational Plan (OP) as per the guideline. The plan thus prepared when gets approved by their general assembly will be submitted to CCO for approval. This will be in operation only when CCO signs on it and officially hand over to the community. The BZCFs coordinates with BZUCs to manage their forest.

There are 71 BZCFs in the Park managed by local community. These forests act as corridors for wildlife to move from BaNP to BNP and also to the PAs of India. Although, there are strict rules, the grazing pressure is very high in the forest and due to human disturbance, there is frequent forest fire in the windy season. BZCFs of Changainala, Sikta-Gabar and Sauri-Bairia sections are highly degraded due to human pressure.

### 10.3.2 Land use

The BZ consists of different land use types. The major land use types are Sal forest, Mixed Hardwood forest, Khair-Sissoo forest, Higher Churia forest, Lower Churia forest, cultivated land, wooded grassland, Plantation area, and River area (Fig 12).

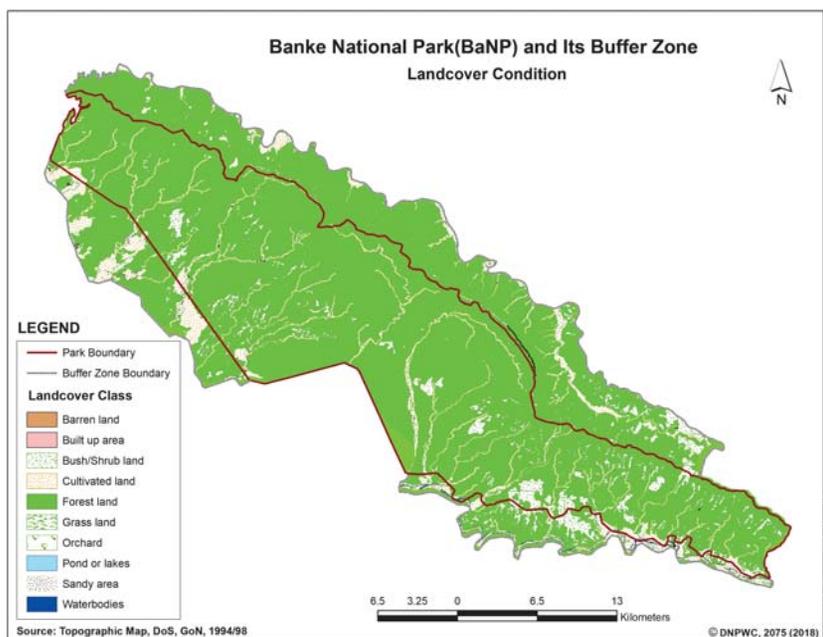


Figure 12: Land cover map of BaNP

## **10.4 Management Strategies**

### **10.4.1 Zonation**

For management purpose, BZ will be divided into conservation zone, sustainable use zone and intensive use zone.

#### **10.4.1.1 Conservation Zone**

The large forest patches in BZ is equally good as a good habitat for wildlife. Thus, these areas will be basically managed as extended wildlife habitat where extraction of forest products will be restricted but the area will be allowed for regulated tourism activities if needed.

#### **10.4.1.2 Sustainable Use Zone**

The forested area in BZ which is managed by community for dual purpose of meeting the need of forest products for the providing refuge for dispersing population of wildlife falls under this category of zonation.

#### **10.4.1.3 Intensive Use Zone**

This is the area in the BZ, including all the settlements and private lands, where environment-friendly development activities will be carried out to enhance the livelihood of the people living in the area through various developmental inputs.

### **10.4.4 Participatory 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 in the BZ. The forest in the BZ will be handed over to local community as BZCF to reduce their daily needs of fine wood and fodder. Similarly, river training works will also be carried out to combat recurring flash floods during monsoon season.

### **10.4.5 Community Development**

To reduce rural poverty, social development will be focused in BZ with special focus to small infrastructure. For this, need-based and site-specific intervention will be undertaken garnering support of local communities. Site specific plans for school support, drinking water facility, support of small irrigation, culvert, small bridge, hume pipes, cause way, drainage construction, river training, and toilet construction will be the guiding document for implementing developmental initiatives in the respective BZUCs and BZUGs. Most of these small-scale infrastructures are also identified to be vulnerable under changing climate and hence their repair and maintenance including coordination with other agencies will be a key strategy.

### **10.4.6 Income Generation and Skill Development**

Income generation and skill development activities have been identified as one of the important component of BZ program to reduce income poverty and improve the economic condition of local people. The income generation and skill development activities will be carried out targeting poor, women, socially excluded and marginalized communities. Income generation activities will mainly focus in diversifying agriculture and livestock programme including fisheries, poultry, piggery and enhancing skills of local communities in these areas. Support such as improved livestock sheds, fodder plants and cement troughs for stall feeding, feed machine etc. were identified as key support areas also

to reduce risks associated with climate change impacts on local livelihoods. Similarly, skill-based job which has market in the rural areas will be identified to provide training to local people so that they can have self-employment.

#### **10.4.7 Capacity building**

Training of members of BZ communities is recognized as a vital component of efficient PA management. The principal goal of the training is to raise the capacity of BZ institutions' members to enhance knowledge, attitudes, skills, capabilities and tools to plan, manage and monitor BZ programme. Chairperson, Secretary and other members of executive BZMC need to develop the skills to establish and maintain the complex relationships and networks with stakeholders that are essential for sustainable and effective management. Identifying training needs should precede any learning initiative. The leadership development, account keeping, record keeping, office management, participatory planning, monitoring and evaluation are some of the important trainings required for the BZ communities.

#### **10.4.8 Conservation Education**

Conservation education is important for several reasons; it fosters a sense of connection to the natural environment, promotes sustainable development and encourages conservation of irreplaceable natural resources and vulnerable plant and animal species. Conservation awareness essentially serves as an educational tool, helping local people understand economic, aesthetic and biological importance of preserving resources and reducing or eliminating the harmful impacts of man-made alterations. Conservation awareness or education helps people understand the consequences of human activities on various lands and identifies remedial solutions.

Several awareness raising activities will be conducted focusing on different section of the society, e.g. BZ communities, eco-clubs, mother groups, and social activists to increase awareness towards participatory biodiversity conservation and develop positive attitude towards the Park. The activities such as celebration of conservation days, organizing rally, radio programme, exchange visits and school level environmental programme will be carried out.

#### **10.4.9 Tourism Promotion**

Although, BZ of BaNP has its own tourism potential, there are only few eco-tourism attractions. Recently, there are several tourist resorts and facilities have been established targeting tourists nearby BZ. To promote community based eco-tourism in BZ as a means of sustainable livelihoods for the people living in BZ, more tourism products and additional potential areas will be explored.

#### **10.4.10 Functional Coordination**

The BZMC is an apex body of the BZ with an elected body of members representing the BZUC. BZUG is the lowest tier organization of the people living in the BZ. These BZUGs are further federated to form BZUC at the sector level. The chairpersons of these BZUCs will form the BZMC at Park level. CCO acts as member secretary in the BZMC. Apart from this, there are also community forests, cooperatives which work under the BZUC as functional unit.

All the BZUG under each BZUC will prepare their plan with broader consensus which will then combine to make the plan of BZUC. The plan thus prepared from bottom-up planning process will be endorsed from BZUC and sent to BZMC. Participation of women and underprivileged community will be ensured in planning and implementation. In order to prioritize the needs and support to be provided, participatory ranking of the users will be done based on their well-being and proximity of the settlement to the national Park. Prior to approval, the provision for reviewing the plan by BZMC

will be made for its refinement and aligning the activities to be supported by other line agencies. Similarly, BZMC will also prepare their five-year management plan which is prepared in consultation with BZMC and is approved by DNPWC.

#### **10.4.11 Conflict Minimization**

The reduction of human-wildlife conflict arising in the BZ of the Park 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 BaNP. However, there are few reported cases of wildlife damage recorded in the BZ. Killing of human and animal by tiger is a management issue in the BZ over the period.

#### **10.4.12 Regulation of BZ Resources**

##### **10.4.12.1 Management of forest products**

The management and conservation of BZ forest resources is a matter of great concern. The demand of the forest resources right from the fuel wood and timber is realized to be the major challenge in managing forest resources. The use of forest product is carried out as per the operational plan of community forest. In the absence of community forest, the BZUC will play bridging role with posts to provide forest product from BZ forest.

##### **10.4.12.2 Management of sand, gravel and boulder**

Sand, gravel and boulders are one of the major sources for the construction of roads, buildings and other purposes, which play a vital role in the socio-economic and infrastructural development of the community as well as the nation. Alongside that, it is also a good source of revenue for the local bodies. An increase in demand for sand and gravel for construction purposes has placed heavy pressure on sand, gravel and boulder resources. Therefore, the extraction of these three important construction aggregates is bound to have considerable negative effect on the place where they occur. Rivers and their floodplains are a major economic resource due to availability of sand and gravel. Although these aggregates are of paramount importance, studies have shown over exploitation of these aggregates can reduce water quality as well as degrade the channel bed and banks. The mining of these aggregates on the floodplain can affect the water table and alter the land-use for agricultural purposes. Rivers shift their courses from time to time, resulting in natural cycles of erosion and deposition of sand and gravel. The extraction of sand and gravel from rivers, streams, floodplains and channels conflict with the functionality of river ecosystems.

The excavation and use of sand, gravel and boulder in BZ is limited to its users in regulated way for their own purpose other than commercial. For the extraction other than local consumption, a separate IEE has to be undertaken. Regulated excavation of such products from rivers is allowed to the BZ communities only after charging royalty. These excavation activities are prohibited in areas where it could affect habitat, breeding and mobility of the aquatic life. Besides this, the excavation is limited to certain months and allowed only in designated river sections. Excavation should be in small scale more closely to the existing annual quantity of permission (supply). The standards enshrined in the Environmental Protection Act, 2053, and Environment Protection Regulation, 2054, should be adhered to while executing the excavation related activities. Regular monitoring, supervision and relevant studies are necessary to take right decisions in this matter. In any case, transportation and use of sand, gravel and boulder should not be extended outside the BZ. The use of mechanized equipment could be made available subject to the Park's permission.

Earlier, Local Self Governance (LSG) Act, 2055 allowed Local bodies to manage sand, gravel and boulder from the rivers outside of PA. Currently, while state restructure is already implemented through

elected executives in local bodies, they have right to formulate Acts and Rules as per their needs. In this context, LSG ACT, 2055 has been replaced by Local Government Operation Act, 2074 and empowers the local Government to coordinate and implement development program and for rationale utilization of locally available natural resources. In the PA, BZ management Regulation, 2052 gives BZUC the authority to manage forest resources including sand, gravel and boulder and this can be comfortably exercised for local consumption. The BZUC will prepare their management plan with the support of technical staff of the Park 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, gravel and boulder) that can be collected from the rivers and streams of BaNP border and BZ for the period of five years (2075/76-2079/80) is presented in Annex XI. The BZUC will extract the sand, gravel and boulder equally for five years coordinating with sectors or head quarter. The quantity of the river resources to be extracted for each year can be revised in any point of time (year) if it is not extracted equally every year.

### **10.5 Activities**

- Provide support to form 10 BZCFs;
- Provide support to 150 BZCFs to prepare constitution, operational plan and its renewal;
- Organize BZCF management trainings;
- Support in institutional strengthening of BZUGs, BZUCs, BZCFs;
- Support BZUCs to prepare five year plan;
- Support to operate 3 private nurseries in 3 districts BZ of BaNP;
- Provide support to installation appropriate biomass energy technologies such as Improved Cook Stove (ICS) and biogas;
- Restore degraded forests in the BZ/national forests by artificial or natural regeneration;
- Create alternative grazing land and ponds in appropriate areas of BZ for livestock to reduce pressure on core area and maintainance;
- Construct fire lines in BZ forests;
- Provide seedlings and organize plantation in the corridor, public lands to enhance greenery in degraded corridors;
- Provide relief fund for the victims of human wildlife conflict efficiently;
- Pilot rain water harvesting program in selected Churia region;
- Construction of culvert and cause way;
- Support to repair and maintenance of Tuber Culosis rehabilitation centre at Agaiya;
- Upgrade the fire line from Paruwa khola to Balapur village;
- Construct drinking water facilities at Rapti sonari -1, Bajhkholi and Baijanath-1, Chisapani;
- Prepare livelihood improvement plan;
- Promote high value crops that are not preferred by wildlife;
- Provide livestock, poultry and off-season vegetable farming trainings;
- Provide support to skill based occupational trainings to local people of BZ;
- Organize orientation related to conservation legislation in order to maintain Park-people amity;
- Initiate conservation focused programme in schools of BZ by forming Eco-clubs;

- Strengthen Eco-clubs by providing trainings such as team building, management of club as organization and organizing events;
- Mobilize Eco-clubs to organize plantation, clean up campaigns and conservation rallies;
- Provide support to organize conservation related school level contest such as oratory, quiz, essay, poem and songs to enhance their knowledge in conservation,
- Organize conservation education tours to Eco-club members to increase their awareness in biodiversity conservation;
- Organize learning visits in other PAs to BaNP staff and BZUC members to see the success stories and interact with other community members;
- Produce Information Education and Communication (IEC) material;
- Celebrate conservation events and days;
- Control stray dogs; and
- Monitor the extraction of soil, sand and gravel in coordination with local authority.

# Activity, Budget and Logical Framework

## 11.1 Activity and Budget

The summary of the budget required for the implementation of activities prescribed by the plan for the period of five years (2075/76-2079/80) is NRs. **1,232,393,911.00 (NRs. One billion two hundred thirty two million three hundred ninety three thousand nine hundred and eleven)**. The breakdown of budget in various themes across the Fiscal years is presented in Table 4 with budget allocation of 77% in the programme and 23% in administrative purposes. The plan focuses mainly in BZ with 31% which also includes the ambitious plans of all the BZUCs. The next priority is given to Park protection and habitat management and allocates around 15% and 10% respectively. Detail activities including budget for the entire five-year is given in Annex VI.

**Table 4: Summary of budget for the management plan (NRs. In thousand)**

S.N.	Activities	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	4 <sup>th</sup> Year	5 <sup>th</sup> Year	Total Amount	Percent
1	Park protection	41465	43833	32753	37118	25363	<b>180532</b>	14.65
2	Habitat management	23800	22523	23925	25243	27300	<b>122790</b>	9.96
3	Species conservation	6737	6103	9319	10682	10215	<b>43055</b>	3.49
4	Fire management	750	1625	875	2438	1900	<b>7588</b>	0.62
5	Wildlife health management	1172	1231	1289	2923	2406	<b>9021</b>	0.73
6	Encroachment management	11425	11051	11578	12104	12630	<b>58788</b>	4.77
7	Research, monitoring and capacity building	10100	10343	8065	12660	18158	<b>59325</b>	4.81
8	Tourism	11630	11713	11528	7855	8976	<b>51701</b>	4.20
9	Climate change and Solid waste management	3700	5565	5363	6299	4517	<b>25444</b>	2.06
10	Buffer Zone	69118	79357	78252	82042	78221	<b>386989</b>	31.40
11	Administrative	52194	54898	57413	60023	62633	<b>287162</b>	23.30
	<b>Sub Total</b>	<b>232091</b>	<b>248241</b>	<b>240359</b>	<b>259385</b>	<b>252318</b>	<b>1232394</b>	100.00

The budget available for BaNP in FY 2074/75 was NRs. 149,074,179 (One hundred forty nine million seventy four thousand one hundred and seventy nine) that includes NRs.113,782,000 (One hundred thirteen million seven hundred eighty two thousand) allocated by the GoN and NRs. 35,292,179 (Thirty five million two hundred ninety two thousand one hundred and seventy nine) allocated by conservation partners (mainly ZSL, NTNC, WWF Nepal and TAL). Taking the budget allocation of FY 2074/75 as

base allocation for FY 2075/76 as well and it is increased by 5% for the next two years and 10% then after, the allocation is estimated for coming five fiscal years. With this estimation, the Government allocation budget for the plan is around 64% (Table 5). It is expected that BZUCs will tap the resources from local bodies conservation partners will contribute more to fulfill the deficit of 36%. With the implementation of the plan it is expected that it will generate 138818 man days of labour.

**Table 5: Cost of the plan and available budget for BaNP (NRs. In thousand)**

Description	Budget					Total
	FY 2075/76	FY 2076/77	FY 2077/78	FY 2078/79	FY 2079/80	
Cost of the management plan	232090.83	248240.62	240358.91	259385.24	252318.31	<b>1232393.91</b>
Total allocation in BaNP by GoN and Conservation Partners	149074.18	156527.89	156527.89	163981.60	163981.60	<b>790093.15</b>
<b>Government allocation in percentage</b>	<b>64.23</b>	<b>63.05</b>	<b>65.12</b>	<b>63.22</b>	<b>64.99</b>	<b>64.11</b>

## 11.2 Logical Framework Analysis

The logical framework of BaNP and its BZ Management Plan for five years period 2075/76-2079/80 (2018/2019-2022/2023) is presented in Table 6.

**Table 6: Logical framework analysis**

Narrative Summary	Objectively Verifiable Indicators (OVI)	Means of Verification	Assumption
<b>Vision</b>			
BaNP and its BZ is visualized as an extended habitat for mega fauna species especially wild tigers in western Terai of Nepal, where local people can live in harmony with nature which eventually contribute for the well-being of the local community			

<b>Narrative Summary</b>	<b>Objectively Verifiable Indicators (OVI)</b>	<b>Means of Verification</b>	<b>Assumption</b>
<b>Goal</b>			
The goal of BaNP and its BZ management is to conserve and maintain ecological integrity of the Park that eventually supports for the livelihood improvement of the people living in BZ	Increased number of tigers in BaNP together with flora and fauna, improved livelihood of local people	<ul style="list-style-type: none"> <li>• National inventory reports. Tiger and Wild elephant</li> <li>• Annual progress Report</li> <li>• Progress Report of conservation partners</li> <li>• Human Development Index reports</li> <li>• Living standard survey reports</li> <li>• Study Reports and Research Papers</li> </ul>	<ul style="list-style-type: none"> <li>• No occurrence of natural disaster especially, forest fire land slide and damage of Sikta Irrigation</li> </ul>
<b>Purpose</b>			
To protect and conserve biological diversity of the Park with special focus on protected wildlife species including other flora and fauna,	<ul style="list-style-type: none"> <li>• Improved habitat for wildlife,</li> <li>• Created new grassland and expanded existing grasslands</li> <li>• Restored wetlands,</li> <li>• Created new water holes</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>• Articles in the newspaper</li> </ul>	<ul style="list-style-type: none"> <li>• Adequate budget provided to implement activities</li> </ul>
To manage and enhance habitat of both predator and prey base species thereby maintaining healthy ecosystem of terai and churia region,	<ul style="list-style-type: none"> <li>• Increased number of tigers and four horned antelope together with other flora and fauna</li> <li>• Reduced number of illegal cases</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>• Articles in the newspaper</li> </ul>	<ul style="list-style-type: none"> <li>• Adequate staff provided to management Conservation activities</li> </ul>
To promote tourism in the Park and its BZ through tourism infrastructure development and local culture conservation	<ul style="list-style-type: none"> <li>• Increased visitors' satisfaction,</li> <li>• increased employment opportunities</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>	<ul style="list-style-type: none"> <li>• Conservation-friendly tourism promotion</li> </ul>

Narrative Summary	Objectively Verifiable Indicators (OVI)	Means of Verification	Assumption
To intensify local communities' engagement in biodiversity conservation through conservation awareness raising, minimizing human-wildlife conflict and improving livelihood opportunities of the 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 conservation awareness</li> <li>• increased conservation friendly livelihood opportunities,</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>	<ul style="list-style-type: none"> <li>• BZ communities are unified and positive to cooperate with effective coordination, collaboration and networking</li> </ul>
To strengthen institutional capacity to carry out integrated conservation and development activities through research, training and cooperation among stakeholders.	<ul style="list-style-type: none"> <li>• Updated database</li> <li>• The BaNP staffs delivers both technical and management services effectively and efficiently</li> <li>• The delivery of services provided by Conservation committees are improved</li> <li>• Increased joint venture activities, projects and programmes</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> </ul>	<ul style="list-style-type: none"> <li>• The staffs are not frequently transferred</li> <li>• Staff motivation is continued</li> </ul>
<b>Output 1</b>			
1.1 Maintenance of viable population of tigers in Banke-Bardia TCU 1.2 Reduction of illegal trade of wildlife parts in Nepal-India border	<ul style="list-style-type: none"> <li>• No. of tigers harbored at BaNP</li> <li>• No. of illegal trade of wildlife parts decreased</li> </ul>	<ul style="list-style-type: none"> <li>• Updated report of flora and fauna,</li> <li>• Regular count of tiger,</li> <li>• Progress report,</li> <li>• Research reports</li> </ul>	Poaching is controlled by Park protection activities

Narrative Summary	Objectively Verifiable Indicators (OVI)	Means of Verification	Assumption
<b>Output 2</b>			
1.1 Improvement of habitat required for both tigers and ungulates	<ul style="list-style-type: none"> <li>• Ha. of grassland increased</li> <li>• No. of wetlands restored and created</li> <li>• Ha. of weeds and IAS controlled in grassland and wetlands</li> </ul>	<ul style="list-style-type: none"> <li>• BaNP habitat monitoring report,</li> <li>• Progress report,</li> <li>• Research reports</li> </ul>	
<b>Output 3</b>			
3.1 Establishment of visitor information centre in all sectors 3.2 Increased no. of tourism based private entrepreneurs 3.3 Operation of cultural events and establishment of cultural museum 3.4 Satisfaction of visitors through nature based tourism and services and facilities received 3.5 Increased coverage of BaNP in media	<ul style="list-style-type: none"> <li>• No. of VIC established,</li> <li>• No. of increased tourism based private entrepreneurs</li> <li>• No. of cultural events organized</li> <li>• No. of tourist expressing satisfaction in visiting BaNP</li> <li>• No. of news, article, interview and video documentary published, aired and broadcasted in newspaper, radio and TV respectively</li> </ul>	<ul style="list-style-type: none"> <li>• Progress report,</li> <li>• Conservation partners progress report,</li> <li>• Tourism products,</li> <li>• No. of tourism services operated,</li> <li>• Clippings of news articles,</li> <li>• Cultural Museum,</li> </ul>	Political stability is maintained and improved
<b>Output 4</b>			
4.1 BZCFs are handed over to the local community 4.2 Forest and grassland developed in private and public land 4.3 Increased income of local people 4.4 Reduced human-wildlife conflict 4.5 Increased participation of local people in conservation activities	<ul style="list-style-type: none"> <li>• No. of BZCFs handed over</li> <li>• Ha. of forest and grassland in public land,</li> <li>• No. of drinking water scheme supported to community people,</li> <li>• No. of toilets supplied with water facility,</li> </ul>	<ul style="list-style-type: none"> <li>• Progress report,</li> <li>• Monitoring report,</li> <li>• Progress reports of other GoN offices,</li> <li>• Project completion reports,</li> <li>• Public audit reports,</li> <li>• Meeting minutes</li> </ul>	There is adequate forest to be handed over as Community forest and available of public land to develop forest

Narrative Summary	Objectively Verifiable Indicators (OVI)	Means of Verification	Assumption
	<ul style="list-style-type: none"> <li>No. of children going to school,</li> <li>No. of people benefitted by health post,</li> <li>No. of people operating small enterprise</li> <li>No. of people involved in conservation activities rises,</li> </ul>		
<b>Output 5</b>			
5.1 BaNP staffs and BZUC committee members are trained in both technical and management aspect 5.2 Law enforcement is smooth without any conflict 5.3 Increased involvement of conservation partners in institutional strengthening	<ul style="list-style-type: none"> <li>No. of BaNP staffs and Conservation Committee members benefitted,</li> <li>No. of reduced conflict between BaNP and community members while law enforcement,</li> <li>Resources pooled in conservation</li> </ul>	<ul style="list-style-type: none"> <li>Training reports,</li> <li>Progress reports</li> <li>Records of conflict between BaNP and community members</li> </ul>	Political members cooperate with BaNP

Activities	
<b>Park Protection</b> <ul style="list-style-type: none"> <li>Construct 1 wildlife crossing bridge, 1 fly over bridge and 2 underpass at strategic locations, in coordination with Department of Road (DoR), within the 25 km highway to facilitate wildlife movement;</li> <li>Install CC cameras in the highway from Obhari to Kusum and undertake regular maintenance;</li> <li>Liase with Telecommunication Company to establish communication towers for effective communication;</li> <li>Establish radio communication throughout the Park including repair and maintenance;</li> <li>Construct 60km fireline just below Churiya from Kusum to Kohalpur;</li> <li>Upgrade existing 30 Km of all-weather water otta shield road with the cooperation of DoR and construct additional 50 km of all-weather road networks inside the Park;</li> <li>Carry out repair and maintenance for 125 km of fire line throughout the year;</li> <li>Construct 12 buildings (4 nos. to Park and 8 nos. to security units) at Hattidamar-Salyan, Ambasa, Kyureni, Mahadeva and Balapur to cover gap areas and carry out regular administrative work;</li> </ul>	<b>180,532,000</b>

Activities	
<ul style="list-style-type: none"> <li>• Construct 2 buildings for Hattisar, 4 shed houses for elephants and 3 grain store house at Dhakeri, Buchapur and Khadkabar;</li> <li>• Repair and maintenance of Park and security post buildings including accommodation facilities, power supplies;</li> <li>• Drinking water supply to the posts and security units including maintenance and repair;</li> <li>• Construct 10 RCC watch towers in sensitive areas including repair and maintenance of existing watch towers;</li> <li>• Procure food, supplies and equipment required for maintaining elephant management units on a yearly basis;</li> <li>• Undertake camping, sweeping operation, short-medium-long range patrol to deter poaching and locate leg hold traps of iron set to trap wildlife (especially tiger);</li> <li>• Establish, strengthen, institutionalize CBAPU (Chisapani, Kohalpur, Bharaiya, Dhakeri, Mahadeva- Shamshegunj, Sikta, Kusum, Rajkot, Nauwasta, Ghuiyabari) and develop a network of CBAPUs;</li> <li>• Develop a network of CBAPU;</li> <li>• Establish local informants around sensitive areas;</li> <li>• Procure 20 night vision binoculars for Park patrolling;</li> <li>• Procure 100 bicycles, 10 motor bikes including repair and maintenance;</li> <li>• Procure 1 JCV (heavy equipment vehicle), including repair and maintenance, to construct fire line including repair and maintenance; and</li> <li>• Procure 2 four-wheel vehicles, including repair and maintenance, for sectors to make effective patrolling and Park management; and</li> <li>• Procure fuel for motorbikes, JCV and vehicles.</li> </ul>	
<p><b>Habitat Management</b></p> <ul style="list-style-type: none"> <li>• Carry out spatial mapping of all the grasslands, wetlands and Alien Invasive Species of both the Park and BZ and carry-out periodic monitoring to support management and decision-making;</li> <li>• Maintain grasslands and wetlands on annual basis;</li> <li>• Study distribution and abundance of palatable grass species, recording XY coordinate and conduct regular monitoring of these species;</li> <li>• Manage grassland by clearing 1000 hectares of woody species;</li> <li>• Create grassland of 50 m on the both sides of 100 km fire line by cleaning, removing shrubs and uprooting trees;</li> <li>• Clean the shrub up to 10 m on the both sides of 50 km highway to minimize risks of road accidents and kills;</li> <li>• Carry out regular uprooting, drying and burning of 1000 ha of grassland to produce new flush of palatable and nutritious grasses and to reduce forest fire;</li> <li>• Removal and control of IAS in an area of 250 hectare in five years;</li> <li>• Construct 25 additional water holes (RCC or earthen) at water deficient areas;</li> <li>• Install 10 solar water pumps to recharge water holds;</li> </ul>	<b>122,790,000</b>

Activities	
<ul style="list-style-type: none"> <li>• Maintenance of wetlands and waterholes by cleaning and removing aquatic weeds;</li> <li>• Undertake activities to enhance, maintain and restore wetlands including its functions;</li> <li>• Install solar water pump to recharge water holes; and</li> <li>• Assess water quality in regular intervals.</li> </ul>	
<p><b>Species Conservation</b></p> <ul style="list-style-type: none"> <li>• Update Flora and Fauna of BaNP;</li> <li>• Restore, maintain and manage degraded forests, vegetation in the, biological corridors (BZ/national forests and CFs outside PA) by artificial or natural regeneration for safe dispersal of tigers;</li> <li>• Restore, maintain and manage degraded wetlands and water holds in the biological corridors by uprooting and cleaning of weeds to maintain a healthy population of tiger and prey species;</li> <li>• Evacuate and restore encroachments in biological corridors within and outside of BZ;</li> <li>• Procure private land of biological corridor to allow free and safe movement for wildlife;</li> <li>• Undertake tiger count in every five years using camera trap</li> <li>• Manage human- tiger conflict and address issues of ‘man-eater’ tiger immediately when informed;</li> <li>• Prepare land use plans for critical habitats of tigers outside PA’s and manage them on the basis of land use plans;</li> <li>• Undertake study regarding various aspects of four horned antelope;</li> <li>• Prepare four horned antelope conservation action plan;</li> <li>• Disseminate importance of four horned antelope conservation in the community;</li> <li>• Carry out spatial distribution and abundance study of four horned antelope;</li> <li>• Translocation of Black buck in BaNP</li> <li>• Provide support to problem animal, injured wildlife and orphan wild animal management practices that including provision of food and treatment;</li> <li>• Release gharial in Rapti river;</li> <li>• Introduce mashir fish, tortor in Rapti and Babai river in cooperation with Rampur Campus;</li> <li>• Construction of wildlife guiding fence in the canal constructed by Sikta Project;</li> <li>• Construction of appropriate stairs or ramps in regular places of Sikta Irrigation Canal;</li> <li>• Vaccinate domestic animal in collaboration with Livestock Service Office to reduce communicable diseases;</li> <li>• Collaborate with Livestock Service Office and introduce hybrid animal (goat, bull and buffalo) and replace unproductive livestock;</li> <li>• Promote stall feeding to reduce grazing pressure;</li> <li>• Promote fodder tree plantation in private land;</li> </ul>	

<b>Activities</b>	
<ul style="list-style-type: none"> <li>• Update digital database maps using latest topo sheets, satellite imageries and aerial photographs for updating tiger information;</li> <li>• Erect signages of warning to the passers-by in the major rights of ways, resource collection sites and shrines;</li> <li>• Erect hoarding boards in the highways to reduce animal hit;</li> <li>• Monitoring of vehicle by operating time card system;</li> <li>• Use of radar gun to check speed;</li> <li>• Random travelling in the bus to check the speed;</li> <li>• Procure 10 bird watching binoculars;</li> <li>• Procure 30 digital cameras to take pictures of wildlife and bird;</li> <li>• Procure 10 GPS for sectors and Range posts; and</li> <li>• Procure 10 Laptop Computers for Rangers.</li> </ul>	<b>43,055,150</b>
<p><b>Fire Management</b></p> <ul style="list-style-type: none"> <li>• Prepare fire-fighting strategic and management plan and implement it;</li> <li>• Clear fire line or undertake control burning in the fire lines before the onset of fire season;</li> <li>• Identify fire prone areas by using satellite imagery analysis or web-based fire mapper;</li> <li>• Train Park staff and security personnel and BZCF members for fire fighting;</li> <li>• Provide fire fighting equipment to Park post and BZCFs;</li> <li>• Mobilize fire-fighting team with equipment in order to stop spreading of fire in grasslands;</li> <li>• Undertake early burning of grasslands on the basis of burning regime and create firebreaks annually;</li> <li>• Install forest fire early warning systems;</li> <li>• Carry out fire prevention education and awareness activities; and</li> <li>• Establish fire occurrence reporting databases.</li> </ul>	<b>7,587,500</b>
<p><b>Wildlife Health Management</b></p> <ul style="list-style-type: none"> <li>• Establish wildlife orphanage and rescue centre in at least two sectors for emergency treatment;</li> <li>• Carry out regular check-up of elephant at elephant stable and treat them;</li> <li>• Treat injured animal upon arrival at orphanage and rescue centre;</li> <li>• Undertake research and development works towards management of wildlife health;</li> <li>• Coordinate Livestock Service Office (LSO) and conservation partners to provide vaccine to livestock against potential diseases that can be transferred to wildlife;</li> <li>• Support to establish a community based veterinary center with materials required in medical emergencies;</li> <li>• Build capacity of frontline staff to recognize, record and report disease or poor health condition of animals or plants;</li> <li>• Train staff to collect sample of blood, faecal matter, urine or vital organs;</li> <li>• Report and document mortality of wild animals immediately after it comes to notice of any staff as part of disease surveillance strategy; and</li> <li>• Coordinate with livestock office to undertake post-mortem of deceased endangered wild animals.</li> </ul>	<b>9,021,000</b>

Activities	
<p><b>Encroachment Management</b></p> <ul style="list-style-type: none"> <li>• Mapping of encroached areas and potential hotspots where it can expand;</li> <li>• Demarcate boundary of Park and Settlement area to discourage encroachment;</li> <li>• Issue notice to evacuate the encroached area;</li> <li>• Relocate the legal and illegal settlers residing in Dang and Salyan if they are willing to move outside of the PA by providing skill based training and other livelihood options;</li> <li>• Provide compensation for the registered land;</li> <li>• Form committee to address the issues of illegal settlers as unregistered land and encroachers;</li> <li>• Support to improve the livelihood of landless, flood victim people who have encroached the Park area for various reasons and evacuate them in win-win situation;</li> <li>• Fencing, plantation and restoration of evacuated and vulnerable areas; and</li> <li>• Coordinate with Local Government Authorities to resolve the encroachment problem.</li> </ul>	<b>58,787,500</b>
<p><b>Research, monitoring and capacity building</b></p> <p><b>Research</b></p> <p><b>Species Conservation</b></p> <ul style="list-style-type: none"> <li>• Update baseline data on flora and fauna;</li> <li>• Compile all available scientific information on tigers and prey species focusing ecological, methodological and human impacted topics;</li> <li>• Undertake intensive research on trans boundary movement of tigers and the use of corridors;</li> <li>• Prepare land use plans for critical habitats of tigers outside PA's and manage them;</li> <li>• Update digital database maps using latest topo sheets, satellite imageries and aerial photographs for updating tiger information;</li> <li>• Identify indicator species to assess habitat condition;</li> <li>• Study status of Gharial and Mugger crocodile in Rapti river;</li> <li>• Study of distribution and abundance of various prey base species;</li> <li>• Conduct studies on the scale, extent and local variations in the intensity of HWC to help in identifying and designing effective mitigation measures;</li> <li>• Carry out relationship between anthropogenic activities and maintenance of healthy and viable wildlife populations;</li> <li>• Undertake detailed studies on ungulate-habitat relationships and the feeding behavior of ungulates;</li> <li>• Carry out study on spatial distribution and abundance of four horned antelope, hyaena and golden monitor lizard; and</li> <li>• Study ecological processes that affect maintaining healthy wildlife population;</li> </ul>	<b>59,325,000</b>

Activities	
<p><b>Habitat Management</b></p> <ul style="list-style-type: none"> <li>• Mapping of critical wildlife habitats and areas of high conservation significance;</li> <li>• Undertake study to assess habitat condition of Kamdi corridor;</li> <li>• Identify indicator species and monitoring on regular basis to assess habitat condition;</li> <li>• Prepare land use management plans for critical habitats of tigers outside PA's and manage them through BZ communities;</li> <li>• Study distribution and abundance of palatable grass species;</li> <li>• Undertake study to identify the succession pattern of grasslands, forests and wetlands;</li> <li>• Study the effect of IAS to wildlife habitat;</li> <li>• Collaborate with research institutions and academic institutions to find the appropriate measures for controlling IAS;</li> <li>• Conduct study on the effect of habitat fragmentation and degradation on wildlife survival;</li> <li>• Study and document indigenous wetland conservation knowledge, skills and practices;</li> <li>• Carry out wetlands and grasslands mapping and assess their successional dynamics to inform management prescriptions; and</li> <li>• Conduct research, monitoring and documentation for facilitating water and land use planning and management.</li> </ul> <p><b>Fire Management</b></p> <ul style="list-style-type: none"> <li>• Undertake spatial and temporal pattern of fire incidence; and</li> <li>• Identify fire prone areas by using satellite imagery analysis or web-based fire mapper.</li> </ul> <p><b>Encroachment</b></p> <ul style="list-style-type: none"> <li>• Develop protocols for measuring demographic parameters (abundance, survival, dispersal, meta population, source-sink dynamics etc.) in tiger.</li> </ul> <p><b>Tourism Management</b></p> <ul style="list-style-type: none"> <li>• Document perception of visitors about the tourism facilities and services from hotels and Park authorities;</li> <li>• Study to identify potential tourism products and their packaging;</li> <li>• Aspiration of hotel operators regarding services and cooperation from the Park;</li> <li>• Conduct study to identify potential site to promote homestay; and</li> <li>• Undertake marketing strategy to attract visitors in the Park and BZ.</li> </ul> <p><b>Climate Change</b></p> <ul style="list-style-type: none"> <li>• Conduct study of climate change indicators and impact on biodiversity conservation along with identification of adaptation activities;</li> </ul>	

Activities	
<ul style="list-style-type: none"> <li>• Carry out possible impacts of climate change on wildlife population;</li> <li>• Study the impacts of changes in precipitation and temperatures in the biodiversity of the Park;</li> <li>• Undertake vulnerability assessment of species and local communities with respect to climate change; and</li> <li>• Prepare community-based adaptation plans for most vulnerable sections/ areas.</li> </ul> <p><b>Buffer Zone</b></p> <ul style="list-style-type: none"> <li>• Undertake socio-economic condition of local people in the areas where human-wildlife conflict is high;</li> <li>• Carry out relationship between anthropogenic activities and maintenance of healthy and viable wildlife populations;</li> <li>• Conduct study to assess the optimum quantity of sand, gravel and boulder that can be extracted each year; and</li> <li>• Study to improve the management of cremation site (ghat) to reduce waste at both sides of highway.</li> </ul> <p><b>Institutional Strengthening</b></p> <ul style="list-style-type: none"> <li>• Review and upgrade reporting and information sharing system;</li> <li>• Prepare Annual Progress Reports;</li> <li>• Undertake evaluation of five-year management plan;</li> <li>• Prepare next five-year management plan including IEE; and</li> <li>• Undertake study of management effectiveness of the Park.</li> </ul> <p><b>Monitoring</b></p> <p><b>Species Monitoring</b></p> <ul style="list-style-type: none"> <li>• Monitoring of tiger on periodic basis based on camera trap;</li> <li>• Monitor tigers around the BZ with local community engagement;</li> <li>• Monitoring of four horned antelope on periodic basis based on direct count;</li> <li>• Monitoring of indicator species;</li> <li>• Monitor prey base species on regular interval;</li> <li>• Monitoring of small mammals;</li> <li>• Identification and monitoring of climate sensitive species on a long-term;</li> <li>• Monitoring of winter migratory water birds; and</li> <li>• Monitoring of globally threatened and nationally protected birds.</li> </ul> <p><b>Habitat Monitoring</b></p> <ul style="list-style-type: none"> <li>• 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;</li> </ul>	

Activities	
<ul style="list-style-type: none"> <li>• Monitor habitat quality using DNPWC-MIS formats for ground verification, data validation and management implications;</li> <li>• Undertake monitoring of permanent plots, transect lines in forests, grasslands and other habitats;</li> <li>• Monitor impacts of floods and extended droughts on wildlife habitats;</li> <li>• Periodic wetlands and water holes monitoring including water quality; and</li> <li>• Monitor extraction of soil, sand and gravel in coordination with local authority.</li> </ul> <p><b>Fire Monitoring</b></p> <ul style="list-style-type: none"> <li>• Monitor spatial and temporal pattern of fire incidence; and</li> <li>• Monitor fire and fuel dynamics.</li> </ul> <p><b>Tourism Impact Monitoring</b></p> <ul style="list-style-type: none"> <li>• Monitor tourism impact on social, economic and culture; and</li> <li>• Monitor the contribution of tourism to the poor, women and marginalized community.</li> </ul> <p><b>Capacity Building</b></p> <p><b>Park Protection</b></p> <ul style="list-style-type: none"> <li>• Orientation training to security troops for newly appointed Battalion before deployment in the field;</li> <li>• Orientation training to Game Scouts on legal issues;</li> <li>• Refreshment trainings to the field staffs and security personnel;</li> <li>• Basic training to Games Scouts and Rangers to handle Global Positioning System (GPS) equipment, camera, etc.;</li> <li>• Training on Real-time SMART patrolling to Park staff and security troops;</li> <li>• Conduct anti-poaching operation trainings to Park staffs security personnel and CBAPU members;</li> <li>• Conduct crime scene investigation and interrogation trainings to investigators as per legal provision;</li> <li>• Human rights training to handle the convicted people; and</li> <li>• Judicial training to Park Officers.</li> </ul> <p><b>Species Conservation</b></p> <ul style="list-style-type: none"> <li>• Wildlife management and handling training;</li> <li>• Conduct training on habitat and population monitoring techniques;</li> <li>• Training about field techniques, including signs, sound and other indirect evidences of different wildlife species;</li> <li>• Train staff to collect sample of blood, fecal matter, urine or vital organs; and</li> <li>• CITES implementation training.</li> </ul>	

Activities	
<p><b>Habitat Management</b></p> <ul style="list-style-type: none"> <li>• Basic training on vegetation quantification for recording data in monitoring plots; and</li> <li>• Provides training to the Park staff in wildlife habitat monitoring.</li> </ul> <p><b>Fire management</b></p> <ul style="list-style-type: none"> <li>• Conduct forest fire management training to the Park staff, security personnel and BZCF members.</li> </ul> <p><b>Wildlife health management</b></p> <ul style="list-style-type: none"> <li>• Build capacity of frontline staffs to collect sample of blood, fecal matter, urine or vital organs; and</li> <li>• Build capacity of frontline staffs to identify, record and report disease or poor health condition of wildlife;</li> </ul> <p><b>Tourism management</b></p> <ul style="list-style-type: none"> <li>• Provide trainings to nature guides to enhance their capacity in nature interpretation specifically on wildlife, birds and plants etc.; and</li> <li>• Training on nature interpretation and display management.</li> </ul> <p><b>BZ</b></p> <ul style="list-style-type: none"> <li>• Social mobilization training;</li> <li>• Appreciative enquiry training;</li> <li>• Conflict management training;</li> <li>• Community-based climate vulnerability assessment and adaptation planning training;</li> <li>• Organization development and management training;</li> <li>• Leadership development training; and</li> <li>• Account keeping training.</li> </ul> <p><b>Institutional Strengthening</b></p> <ul style="list-style-type: none"> <li>• General and specialized ToT;</li> <li>• Public administration and management training;</li> <li>• Planning, monitoring and evaluation training;</li> <li>• Database management Training to Rangers and Officers; and</li> <li>• Geographical Information System (GIS) training to Rangers and Officers.</li> </ul>	
<p><b>Tourism</b></p> <ul style="list-style-type: none"> <li>• Construct seven entry gates for visitors in Shiva khola, Kusum, Sikta, Dhakeri, Chisapani, Sutaiya and Khadkabar;</li> <li>• Construct multipurpose VICs at Kohalpur and Obhari that includes ticket counter, display centre, museum, documentary showing hall, souvenir shop, refreshment centre, and rest room;</li> <li>• Place display boards with information on tourist destination areas and tourism products of BaNP in Bhairahawa and Nepalgunj Airport;</li> <li>• Place display boards in the VICs of BNP and KrCA to attract visitors in BaNP;</li> <li>• Construct, maintain and repair concrete or wooden watch towers at appropriate locations near grasslands and waterholes;</li> </ul>	<b>51,701,252</b>

Activities	
<ul style="list-style-type: none"> <li>• Erect hoarding boards informing Do's and Don'ts in the Park and BZ for the visitors;</li> <li>• Place signage at appropriate location in the Park to show direction to the visitors;</li> <li>• Construct raised platforms to climb for elephant safari, at least, in two places;</li> <li>• Construct cultural house and museums in the BZ;</li> <li>• Support BZ community to operate community lodges and homestays in the tourist hubs of the BZ especially in Gavar valley, Balapur and Buchapur;</li> <li>• Undertake study of elephant safari route and provide elephant safari service to the visitors;</li> <li>• Undertake study to finalize jeep safari routes and provide route permit and license to operate jeep safari;</li> <li>• Place advertisement boards of elephant and jeep safari in the Park;</li> <li>• Prepare Video Spot to promote tourism in BaNP;</li> <li>• Advertise tourism products in the Park through Television, Radio and FM radio at national and local level;</li> <li>• Organize meetings and training to promote local entrepreneur and nature guide to operate jeep safari and other facilities in the Park;</li> <li>• Organize Clean-up campaigns to manage waste along the highway (waste collection and disposal);</li> <li>• Conduct nature guide trainings to local and interested individuals giving priority to indigenous and marginalized communities and youths;</li> <li>• Enhance capacity of nature guides in nature interpretation specifically on wildlife, birds, plants through trainings and some experience sharing activities;</li> <li>• Conduct home-stay, house-keeping and cook trainings at Aghaiya, Dhakeri, Khadkabar, Gavar valley, Balapur and Buchapur;</li> <li>• Organize cottage and small business development and management training;</li> <li>• Provide support to journalists to visit BaNP and publish article;</li> <li>• Publish news and article in newspaper; and</li> <li>• Production of video documentary.</li> </ul>	
<p><b>Climate Change Adaptation and Solid Waste Management</b></p> <p><b>Climate Change</b></p> <ul style="list-style-type: none"> <li>• Conduct participatory vulnerability assessments to identify the most vulnerable regions and communities;</li> <li>• Prepare Local Adaptation Plan of Action for all the municipalities and rural municipalities of BZ while prioritizing Rapti Sonari and Babai to start with;</li> <li>• Form community-based disaster management committee and link them with climate change and adaptation related institutions to tackle climate-related effects;</li> <li>• Conduct trainings to enhance the capacity of Park Staffs, security persons, and BZ communities to cope with the climate change impacts;</li> <li>• Pilot early warning system of flash flood in the flood prone areas;</li> <li>• Construct waterholes in the dry Bhavar region and arrange for permanent water holding either through natural or artificial water recharge;</li> </ul>	<b>25,443,575</b>

Activities	
<ul style="list-style-type: none"> <li>• Create, maintain and expand wetlands and implement water harvesting and regulation mechanisms using available technologies;</li> <li>• Manage grasslands through uprooting weeds by both manual and mechanical including burning where required;</li> <li>• Prioritize preventive measures to minimize fire risks to wildlife by creating and maintaining fire lines as well as awareness programmes;</li> <li>• Prepare forest fire management plan and integrate forest fire control in the OP of BZCF;</li> <li>• Implement community-based forest fire management;</li> <li>• Conserve churia region to control sediment flow in the downstream;</li> <li>• Plant fuel wood species in the BZ to maintain the balance between fuel wood demand and supply for the house hold of local people;</li> <li>• Scale up biomass and energy efficient technologies such as Improved Cook Stove (ICS) and Biogas to reduce fuel wood consumption;</li> <li>• Manage and monitor collection of sand, gravel and boulder from the river in sustainable manner;</li> <li>• Periodic repair, maintenance and upgrading of PA posts, access roads and fire lines in the park to reduce impacts of flooding, landslides and inundation;</li> <li>• Periodic repair and maintenance of community infrastructures such as Jorhatte irrigation canal and Obhari irrigation canal;</li> <li>• Divert Bhakta Khola to Rimna Khola to protect settlement and agricultural land from floods and innundation;</li> <li>• Construct embankment, spur or any soil conservation measure in various rivers and streams to protect park infrastructures, human settlements and wildlife habitats from flood specially around Park head quarter, Paruwa Khola, Rapti River, Duduwa Khola, Babai river banks, Jhijari, Jethinala and Gaukholi; and</li> <li>• Facilitate market linkages and voluntary carbon financing.</li> </ul> <p><b>Solid waste management</b></p> <ul style="list-style-type: none"> <li>• Provide support to manage garbage with special focus on reducing production, recycling, and destruction by prohibiting the use of polluting items such as plastic bags;</li> <li>• Support to develop proper sanitation infrastructures including drainage, toilets, collection and recycling systems;</li> <li>• Demonstrate proper techniques of garbage disposal and recycling techniques to stakeholders;</li> <li>• Prepare a common sanitation guideline to make them adopt minimum sanitation standards for hotel, lodge, homestay and restaurant in managing clean front yard, toilet with leak proof septic tanks and waste water soakage pits; and</li> <li>• Construct new cremation site.</li> </ul>	

Activities	
<p><b>Buffer Zone</b></p> <ul style="list-style-type: none"> <li>• Provide support to form 10 BZCFs;</li> <li>• Provide support to 150 BZCFs to prepare constitution, operational plan and its renewal;</li> <li>• Organize BZCF management trainings;</li> <li>• Support in institutional strengthening of BZUGs, BZUCs, BZCFs;</li> <li>• Support BZUCs to prepare five year plan;</li> <li>• Support to operate 3 private nurseries in 3 districts;</li> <li>• Provide support to installation appropriate biomass energy technologies such as Improved Cook Stove (ICS) and biogas;</li> <li>• Restore degraded forests in the BZ/national forests and CFs in BZ by artificial or natural regeneration;</li> <li>• Create alternative grazing land and ponds in appropriate areas of BZ for livestock to reduce pressure on core area;</li> <li>• Construct fire lines in BZ forests;</li> <li>• Provide seedlings and organize plantation in the corridor, public lands to enhance greenery in degraded corridors;</li> <li>• Manage relief fund efficiently for the victims of human wildlife conflict;</li> <li>• Pilot rain water harvesting program in selected Churia region;</li> <li>• Construction of culvert and cause way;</li> <li>• Support to repair and maintenance of Tuber Culosis rehabilitation centre at Agaiya;</li> <li>• Upgrade the fire line from Paruwa khola to Balapur village;</li> <li>• Construct drinking water facilities at Rapti sonari -1, Bajhkholi and Baijanath-1, Chisapani;</li> <li>• Prepare livelihood improvement plan;</li> <li>• Promote high value crops and crops that are not preferred by wildlife;</li> <li>• Provide livestock, poultry and off-season vegetable farming trainings;</li> <li>• Provide support to skill based occupational trainings to local people of BZ;</li> <li>• Organize orientation related to conservation legislation in order to maintain Park-people amity;</li> <li>• Initiate conservation focused programme in schools of BZ by forming Eco-clubs;</li> <li>• Strengthen Eco-clubs by providing trainings such as team building, management of club as organization and organizing events;</li> <li>• Mobilize Eco-clubs to organize plantation, clean up campaigns and conservation rallies;</li> <li>• Provide support to organize conservation related school level contest such as oratory, quiz, essay, poem and songs to enhance their knowledge in conservation,</li> <li>• Organize conservation education tours to Eco-club members to increase their awareness in biodiversity conservation;</li> <li>• Organize learning visits in other PAs to BaNP staffs and BZUC members to see the success stories and interact with other community members;</li> </ul>	<p><b>386,989,434</b></p>

<b>Activities</b>	
<ul style="list-style-type: none"> <li>• Produce Information Education and Communication (IEC) material;</li> <li>• Celebrate special Days; and</li> <li>• Monitor the extraction of soil, sand and gravel in coordination with local authority</li> </ul> <p><b>Administrative</b></p> <ul style="list-style-type: none"> <li>• Salary, Ration, Uniform and Daily Subsistence Allowances</li> <li>• Procure computer</li> <li>• Procure multimedia projector</li> <li>• Management of office equipment</li> <li>• Stationeries</li> <li>• Procure furniture</li> <li>• Payment of electricity, telephone, Internet</li> </ul>	<b>287,161,500</b>
<b>Total</b>	<b>1,232,393,911</b>

### 11.3 Gender Equity and Social Inclusion

Gender inequality and social exclusion are issues of global concern. Over the last decade, Asia and the Pacific region has made a remarkable progress on these issues (MoUD 2013). 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 non-discrimination, gender equality and social justice. In this regard, BaNP needs to better target the delivery of development to the hardest to reach segments of society, those who have been excluded from development and those who have been overlooked.

BaNP will adopt strategy as a core cross-cutting theme. The implementation of 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 issues is a common concern for all partners. The management plan will mainstream 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 landscape approach involving BZ communities in 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 local community including local Government. The Park will continue to work together with Nepal Army to protect the biodiversity 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. Similarly, BZ institution will also coordinate with local Government to pool the resources to develop infrastructure in the BZ. The Park will adopt communication strategy to orient legislations related to conservation to local people involving BZ communities and Eco-clubs. The strategy will be taken to involve Research institutions 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 effective manner.

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# **Annexes**



## Annex-I

### Flora of Banke National Park

S. N.	Family	Scientific Name	Local Name	Habit	CITES Status	Remarks
1	Acanthaceae	<i>Andrographis paniculata</i>				
2	Acanthaceae	<i>Barleria cristata</i>	Bhende kuro	Herb		
3	Acanthaceae	<i>Barleria prionites</i>	Kuro	Herb		
4	Acanthaceae	<i>Eranthemum purpurascens</i>		Shrub		
5	Acanthaceae	<i>Gomphrena sp.</i>	Jogikath	Tree		
6	Acanthaceae	<i>Hygrophila auriculata</i>	Tal Makhana	Herb		
7	Acanthaceae	<i>Justicia adhatoda</i>	Asuro	Shrub		
8	Acanthaceae	<i>Justicia diffusa</i>	Phulphar	Herb		
9	Acanthaceae	<i>Phlogacanthus thyrsoformis</i>	Chuwa	Shrub		
10	Acanthaceae	<i>Ruellia beddomei</i>		Herb		
11	Acanthaceae	<i>Rungia pectinata</i>	Ukuche Jhar	Herb		
12	Amaranthaceae	<i>Achyranthes aspera</i>	Apamarg/ Datuwan	Herb		
13	Amaranthaceae	<i>Alternanthera sessilis</i>	Bhiringi jhar	Herb		
14	Amaranthaceae	<i>Amaranthus spinosus</i>	Ban lunde/ Kande latte	Herb		
15	Amaranthaceae	<i>Amaranthus viridis</i>	Latte saag	Herb		
16	Amaranthaceae	<i>Digera muricata</i>		Herb		
17	Amaryllidaceae	<i>Curculigo orchioides</i>	Musli kanda	Herb		
18	Anacardiaceae	<i>Buchanania latifolia</i>	Pyari	Tree		
19	Anacardiaceae	<i>Lannea coromandelica</i>	Hallude	Tree		
20	Anacardiaceae	<i>Lannea grandis</i>	Dabdabe	Tree		
21	Anacardiaceae	<i>Mangifera indica</i>	Aanp	Tree		
22	Anacardiaceae	<i>Rhus parviflora</i>	Sati bayer	Shrub		
23	Anacardiaceae	<i>Semecarpus anacardium</i>	Bhalayo	Tree		
24	Anacardiaceae	<i>Spondias amara</i>	Amaro	Tree		
25	Anacardiaceae	<i>Spondias pinnata</i>	Amaro	Tree		
26	Annoanaceae	<i>Milisusa velunina</i>	Dornsal	Tree		
27	Annonaceae	<i>Annona squamosa</i>	Sarifa	Sh/Tree		
28	Apiaceae	<i>Centella asiatica.</i>	Ghod tapre	Herb		
29	Apocynaceae	<i>Alstonia scholaris</i>	Chhatiwan	Tree		
30	Apocynaceae	<i>Carissa carandas</i>	Karenda	Shrub		
31	Apocynaceae	<i>Carissa spinarum</i>	Karenda	Shrub		
32	Apocynaceae	<i>Hollarrhena pubescens</i>	Khirro/ Indrajau	Tree		
33	Apocynaceae	<i>Plumera rubra</i>	Choya Phool	Herb		

S. N.	Family	Scientific Name	Local Name	Habit	CITES Status	Remarks
34	Apocynaceae	<i>Rauwolfia serpentina</i>	Sarpagandha	Shrub		
35	Araceae	<i>Acorus calamus</i>	Bhojo	Herb		
36	Araceae	<i>Arisaema sp.</i>	Sarpa makai	Herb		
37	Asclepiadaceae	<i>Calotropis gigantea</i>	Ank	Shrub		
38	Asclepiadaceae	<i>Calotropis procera</i>	Ank	“		
39	Asteraceae	<i>Ageratina adenophora</i>	Banmara			
40	Asteraceae	<i>Ageratum conyzoides</i>	Gande ghans	Herb		white fl.
41	Asteraceae	<i>Ageratum houstonianum</i>	“	“		blue fl.
42	Asteraceae	<i>Artemisia indica</i>	Titepati	Herb		
43	Asteraceae	<i>Blumea balsamifera</i>	Gaitihare	Herb		
44	Asteraceae	<i>Cirsium arvense /walichii</i>	Thakal	Herb		
45	Asteraceae	<i>Gnaphalium affine</i>	Bokre phool	Herb		
46	Asteraceae	<i>Parthenium hysterophorus</i>	Banmara	“		
47	Asteraceae	<i>Tridax procumbens</i>	Putali Jhar	Herb		
48	Asteraceae	<i>Xanthium strumarium</i>	Bhederuro	Herb		
49	Basellaceae	<i>Basella alba</i>				
50	Bignoniaceae	<i>Oroxylum indicum</i>	Tatelo	Tree		
51	Bombacaceae	<i>Bombax ceiba</i>	Simal	Tree		
52	Butomaceae	<i>Butomopsis latifolia</i>	Karkalo Jhar	Herb		
53	Cannabaceae	<i>Cannabis sativa</i>	Ganja/Bhang	Shrub		
54	Combretaceae	<i>Terminalia alata</i>	Asna/Saj	Tree		
55	Combretaceae	<i>Terminalia bellirica</i>	Barro	Tree		
56	Combretaceae	<i>Terminalia chebula</i>	Harro	Tree		
57	Compositae	<i>Bidens pilosa</i>	Kalo Kuro	Herb		
58	Convolvulaceae	<i>Cuscuta reflexa</i>	Akasbeli	Herb		parasite
59	Convolvulaceae	<i>Ipomea carnea</i>	Besaram	Shrub		
60	Convolvulaceae	<i>Ipomea quamocli</i>	Jante phul	Climber		
61	Cucurbitaceae	<i>Solena heterophylla</i>		Climber		
62	Dilleniaceae	<i>Dillenia pentagyna</i>	Tantari	Tree		
63	Dioscoreaceae	<i>Dioscorea bulbifera</i>	Githa	Climber		
64	Dioscoreaceae	<i>Dioscorea glabra</i>	Ban Tarul	Climber		
65	Dioscoreaceae	<i>Dioscorea hispida</i>	Bharlang	“		
66	Dioscoreaceae	<i>Dioscorea pentaphylla</i>	Bhyakur	Climber		
67	Dipterocarpaceae	<i>Shorea robusta</i>	Sal	Tree		
68	Ebenaceae	<i>Diospyros lancifolia</i>	Tandu	Tree		
69	Ebenaceae	<i>Diospyros tomentosa</i>	Tandu	Tree		
70	Equisetaceae	<i>Equisetum arvanse</i>		Herb		
71	Euphorbiaceae	<i>Bridelia retusa</i>	Gayo	Tree		
72	Euphorbiaceae	<i>Euphorbia hirta</i>	Dudhejhar	Herb		
73	Euphorbiaceae	<i>Jatropha curcas</i>	Sajiwon/ Nimtel	Shrub		

S. N.	Family	Scientific Name	Local Name	Habit	CITES Status	Remarks
74	Euphorbiaceae	<i>Jatropha gossypifolia</i>		“		
75	Euphorbiaceae	<i>Mallotus phillipensis</i>	Sindure	Tree		
76	Euphorbiaceae	<i>Phyllanthus emblica</i>	Amala	Tree		
77	Euphorbiaceae	<i>Phyllanthus parvifolius</i>	Khareto	Shrub		
78	Euphorbiaceae	<i>Phyllanthus virgatus</i>				
79	Euphorbiaceae	<i>Riccinus communis</i>	Andir	Shrub		
80	Euphorbiaceae	<i>Sapium insigne</i>	Khirro	Tree		
81	Euphorbiaceae	<i>Securinega leucopyrus</i>				
82	Euphorbiaceae	<i>Trewia nudiflora</i>	Vellar/Gutel	Tree		
83	Fabaceae	<i>Abrus precatorius</i>	Rati gedi	Climber		
84	Fabaceae	<i>Acacia catechu</i>	Khayer	Tree		
85	Fabaceae	<i>Acacia farnesiana</i>				
86	Fabaceae	<i>Acacia pennata</i>	Arali kanda	Climber		
87	Fabaceae	<i>Acacia rugata</i>	Sikakai			
88	Fabaceae	<i>Albizia lebbek</i>	Kalo Siris	Tree		
89	Fabaceae	<i>Albizia procera</i>	Seto Siris	Tree		
90	Fabaceae	<i>Bauhinia purpurea</i>	Tanki	Tree		
91	Fabaceae	<i>Bauhinia vahlii</i>	Bhorla	Climber		Vine
92	Fabaceae	<i>Bauhinia variegata</i>	Koiralo	Tree		
93	Fabaceae	<i>Butea monosperma</i>	Palans	Tree		
94	Fabaceae	<i>Cassia fistula</i>	Raj brikschha	Tree		
95	Fabaceae	<i>Cassia occidentalis</i>	Thulo Tapre	Shrub		
96	Fabaceae	<i>Cassia tora</i>	Tapre	Shrub		
97	Fabaceae	<i>Clitoria ternatea</i>	Aparjitia Climber			
98	Fabaceae	<i>Crotolaria albida</i>	Bhendi phul	Herb		
99	Fabaceae	<i>Crotolaria calycina</i>		Herb		
100	Fabaceae	<i>Crotolaria prostrata</i>	Chhunchhuni	Herb		
101	Fabaceae	<i>Dalbergia latifolia</i>	Satisal	Tree		
102	Fabaceae	<i>Dalbergia sissoo</i>	Sissoo	Tree		
103	Fabaceae	<i>Desmodium gangeticum</i>	Sal-parni	Shrub		
104	Fabaceae	<i>Desmodium hispida</i>	Bhurlang	Climber		
105	Fabaceae	<i>Desmodium multiflorum</i>	Bhattmase	Shrub		
106	Fabaceae	<i>Desmodium oojeinensis</i>	Sandan	Tree		
107	Fabaceae	<i>Erythrina indica</i>	Faledo	Tree		
108	Fabaceae	<i>Flemingia macrophylla</i>	Bhattwasi	Shrub		
109	Fabaceae	<i>Flemingia strobilifera</i>	Bhattwasi	“		
110	Fabaceae	<i>Indigofera dosua</i>	Dusi swan	Shrub		
111	Fabaceae	<i>Indigofera pulchella</i>	Sakhino	Shrub		
112	Fabaceae	<i>Indopiptadenia oudhensis</i>				
113	Fabaceae	<i>Macrotyloma uniflorum</i>				

S. N.	Family	Scientific Name	Local Name	Habit	CITES Status	Remarks
114	Fabaceae	<i>Millettia auriculata</i>	Gauje lahara	Climber		
115	Fabaceae	<i>Mimosa himalayana</i>				
116	Fabaceae	<i>Mimosa pudica</i>	Lazzabati	Shrub		
117	Fabaceae	<i>Pongamia pinnata</i>	Karengi/ Dithbarna	Tree		
118	Fabaceae	<i>Spatholabus parviflora</i>	Debre lahara	Climber		Vine
119	Fabaceae	<i>Uraria picta</i>				
120	Hydrocharitaceae	<i>Ottelia alismoides.</i>				
121	Labiatae	<i>Mentha spicata</i>				
122	Leeaceae	<i>Leea asiatica</i>	Galeni	Shrub		
123	Liliaceae	<i>Asparagus adscendens</i>	Kurilo/Satabari	Herb		
124	Liliaceae	<i>Asparagus racimosa</i>	Kurilo	Herb		
125	Liliaceae	<i>Theropogan pallidus</i>				
126	Lineaceae	<i>Reinwardtia indica</i>	Bakre ghans/ Pyauli	Shrub		
127	Lythraceae	<i>Lagerstroemia parviflora</i>	Bot dhangero	Tree		
128	Lythraceae	<i>Woordfordia fruticosa</i>	Rani dhangero	Shrub		
129	Malpighiaceae	<i>Aspidopterys nutans</i>				
130	Malvaceae	<i>Abelmoschus manihot</i>				
131	Malvaceae	<i>Abelmoschus moschatus</i>	Kasturi	Herb		
132	Malvaceae	<i>Abutilon indicum</i>				
133	Malvaceae	<i>Kydia calycina</i>	Bohori	Tree		
134	Malvaceae	<i>Malvastrum americanum</i>				
135	Malvaceae	<i>Malvastrum coromandelianum</i>				
136	Malvaceae	<i>Sida cordata</i>	Dalle kuro	Shrub		
137	Malvaceae	<i>Sida cordifolia</i>	Dalle kuro	Shrub		
138	Malvaceae	<i>Sida rhombifolia</i>	Sano chillya	Shrub		
139	Malvaceae	<i>Sida spinosa</i>	Walu/Balu	Shrub		
140	Malvaceae	<i>Thespesia lampas</i>	Ban kapas	Shrub		
141	Malvaceae	<i>Urena lobata</i>	Nalu kuro	Shrub		
142	Meliaceae	<i>Azadirachta indica</i>	Neem	Tree		
143	Meliaceae	<i>Heynea trijuga</i>	Ankatari	Shrub		
144	Meliaceae	<i>Melia azederach</i>	Bakaino	Tree		
145	Meliaceae	<i>Toona ciliata</i>	Tooni	Tree		
146	Menispermaceae	<i>Cissampelos pareira</i>	Batul pate	Climber		
147	Menispermaceae	<i>Tinospora cordifolia</i>	Gurjo	Climber		
148	Moraceae	<i>Ficus auriculata</i>	Timila	Tree		
149	Moraceae	<i>Ficus benghalensis</i>	Bar	Tree		
150	Moraceae	<i>Ficus benjamina</i>	Sami	Tree		
151	Moraceae	<i>Ficus clavata</i>	Berulo	Tree		

S. N.	Family	Scientific Name	Local Name	Habit	CITES Status	Remarks
152	Moraceae	<i>Ficus glaberrima</i>	Pakhure	Tree		
153	Moraceae	<i>Ficus hispida</i>	Kharseto	Tree		
154	Moraceae	<i>Ficus lacor</i>	Kavro	Tree		
155	Moraceae	<i>Ficus racemosa</i>	Gular	Tree		
156	Moraceae	<i>Ficus religiosa</i>	Peepal	Tree		
157	Moraceae	<i>Ficus semicordata</i>	Khanim	Tree		
158	Moraceae	<i>Morus alba</i>	Kimbu	Tree		
159	Myrsinaceae	<i>Ardisia macrocarpa</i>	Damai phul	Shrub		
160	Myrsinaceae	<i>Myrasine semiserrata</i>	Kali kath	Tree		
161	Myrtaceae	<i>Careya arborea</i>	Kumbhi	Tree		
162	Myrtaceae	<i>Cleistocalyx operculata</i>				
163	Myrtaceae	<i>Eucalyptus citriodora</i>	Masala	Tree		
164	Myrtaceae	<i>Eugenia operculata</i>	Kyamuna	Tree		
165	Myrtaceae	<i>Psidium guajava</i>	Amba	Tree		
166	Myrtaceae	<i>Syzygium cumini</i>	Jamun	Tree		
167	Myrtaceae	<i>Syzygium frondosa</i>	Farim	“		
168	Nyctaginaceae	<i>Boerhaavia diffusa</i>	Punarwa	Herb		
169	Oleaceae	<i>Nyctanthes arbortristis</i>	Parijat	Tree		
170	Orchidaceae	<i>Aerides odoratum</i>			II	
171	Orchidaceae	<i>Habenaria furcifera</i>			II	
172	Orchidaceae	<i>Trudelia cristata</i>			II	
173	Orchidaceae	<i>Zeuxine strateumatica</i>			II	
174	Oxalidaceae	<i>Oxalis corniculata</i>	Chari amilo	Herb		
175	Palmaceae	<i>Phoenix aquilis</i>	Thakal	Herb/S		
176	Palmae	<i>Phoenix loureiri var. humilis</i>	Thakal	Herb/S		
177	Pinaceae	<i>Pinus roxburghii</i>	Khote Salla	Tree		
178	Piperaceae	<i>Piper betel</i>	Pan	Climber		
179	Piperaceae	<i>Piper longum</i>	Pipla	Climber		
180	Poaceae	<i>Apluda mutica</i>	Dakle khar	Herb/ grass		
181	Poaceae	<i>Arundinella nepalensis</i>				
182	Poaceae	<i>Brothriochloa bladhii</i>				
183	Poaceae	<i>Chrysopogan serrulatus</i>	Kagati ghans	Herb		
184	Poaceae	<i>Cynoden dactylon</i>	Dubo	Herb		
185	Poaceae	<i>Degetaria sp.</i>	Banso	Herb		
186	Poaceae	<i>Dendrocalamus sp.</i>	Bans	Bamboo		
187	Poaceae	<i>Desmostachya bipinnata</i>	Kush	Herb		
188	Poaceae	<i>Eulalia contorta</i>				
189	Poaceae	<i>Eulaliopsis binata</i>	Babiyo	Herb		
190	Poaceae	<i>Imperata cylindrica</i>	Siru	Herb		
191	Poaceae	<i>Narenga popherecoma</i>	Narkat	Herb		

S. N.	Family	Scientific Name	Local Name	Habit	CITES Status	Remarks
192	Poaceae	<i>Pogonatherum paniceum</i>				
193	Poaceae	<i>Themeda arundinaceae</i>	Khar/Dhaddi	Herb		
194	Poaceae	<i>Thysanolaena maxima</i>	Amriso	Herb		
195	Ponteridaceae	<i>Eichhornia crassipes</i>	Jal kumbhi	Herb		
196	Rhamnaceae	<i>Ziziphus mauritiana Lam.</i>	Sita bayer	Tree		
197	Rhamnaceae	<i>Zyzyphus jujuba</i>	Bayer	Shrub		
198	Rhamnaceae	<i>Zyzyphus rugosa</i>	Hade bayer	Shrub		
199	Rosaceae	<i>Prunus pasia</i>	Mayel	Tree		
200	Rosaceae	<i>Rubus ellipticus</i>	Ainselu	Shrub		
201	Rubiaceae	<i>Adina cordifolia</i>	Karma	Tree		
202	Rubiaceae	<i>Anthocephalus chinensis</i>	Kadam	Tree		
203	Rubiaceae	<i>Ganelia turgid</i>				
204	Rubiaceae	<i>Hamiltonia suaveolens</i>				
205	Rubiaceae	<i>Hymenodictyon excelsum</i>	Lodi karam/ Bhudkul	Tree		
206	Rubiaceae	<i>Mitragyna parvifolia</i>	Faldu	Tree		
207	Rubiaceae	<i>Rubia manjith</i>	Majhitho	Climber		
208	Rubiaceae	<i>Wendlandia puberula</i>	Ban kanyu/ Tilka	Tree		
209	Rubiaceae	<i>Xeromphis spinosa</i>	Maidal/Main kanda	Shrub		
210	Rutaceae	<i>Aegle marmelos</i>	Bel	Tree		
211	Rutaceae	<i>Murraya koenigii</i>	Asare	Shrub		
212	Salicaceae	<i>Anogeissus latifolia</i>	Banjhi/ Dhaunki	Tree		
213	Samydaceae	<i>Casearia tomentosa</i>	Chilla	Tree		
214	Santalaceae	<i>Osyris wightiana</i>	Nundhiki	Shrub		
215	Sapindaceae	<i>Sapindus mukorossi</i>	Rittha	Tree		Planted
216	Sapindaceae	<i>Schleichera oleosa</i>	Kusum	Tree		
217	Sapotaceae	<i>Aesandra butyraceae</i>	Chyuri	Tree		
218	Sapotaceae	<i>Madhuca longifoliavar indica</i>	Mahuwa	Tree		
219	Schizaeaceae	<i>Lygodium japonicum</i>				
220	Scrophulariaceae	<i>Mazus pumilus</i>				
221	Scrophulariaceae	<i>Scoparia dulcis</i>				
222	Simarubaceae	<i>Picrasena javanica</i>				
223	Smilacaceae	<i>Smilax ovalifolia</i>	Kukur daino	Climber		
224	Solanaceae	<i>Datura stramonium</i>	Dhaturo	Shrub/H		
225	Solanaceae	<i>Nicandra physalodes</i>				
226	Solanaceae	<i>Solanum nigrum</i>	Jangali bihin	Shrub		
227	Solanaceae	<i>Solanum torvum</i>	Thulo bihin	Shrub		

S. N.	Family	Scientific Name	Local Name	Habit	CITES Status	Remarks
228	Solanaceae	<i>Solanum virginianum</i>				
229	Solanaceae	<i>Solanum xanthocarpum</i>	Kantakari	Shrub		
230	Sterculiaceae	<i>Helicteres isora</i>				
231	Sterculiaceae	<i>Sterculia vellosa</i>	Odal	Tree		
232	Stilaginaceae	<i>Antidesma diandrum</i>	Amari	Tree		
233	Tiliaceae	<i>Grewia asiatica</i>				
234	Tiliaceae	<i>Grewia disperma</i>				
235	Tiliaceae	<i>Grewia glabra</i>				
236	Tiliaceae	<i>Grewia helicterifolia</i>				
237	Tiliaceae	<i>Grewia optiva</i>	Fusro/Bhimal	Tree		
238	Typhaceae	<i>Typha angustifolia</i>	Pater	Herb		
239	Ulmaceae	<i>Holeptelia integrefolia</i>		Tree		
240	Urticaceae	<i>Urtica dioca</i>	Sisnu	Herb		
241	Verbenaceae	<i>Callicarpa macrophylla</i>	Dahi kamle	Shrub		
242	Verbenaceae	<i>Caryopteris foetida</i>	Khursani ghans	Shrub		
243	Verbenaceae	<i>Caryopteris odorata</i>				
244	Verbenaceae	<i>Clerodendron viscosum</i>	Bhanti	Shrub		
245	Verbenaceae	<i>Clerodendrum indicum</i>	Chinde	Shrub		
246	Verbenaceae	<i>Clerodendrum serratum</i>	Chua	Shrub		
247	Verbenaceae	<i>Colebrockea oppositifolia</i>	Dhursul	Shrub		
248	Verbenaceae	<i>Holmskioldia sanguinea</i>	Jhule phul	Shrub		
249	Verbenaceae	<i>Lantana camara</i>	Banmara	Shrub		
250	Verbenaceae	<i>Phyla nodiflora</i>				
251	Verbenaceae	<i>Pogostemon bengalensis</i>	Rudilo	Shrub		
252	Verbenaceae	<i>Premna barbata</i>	Gineri	Tree		
253	Verbenaceae	<i>Premna interrupta</i>	Gineri	Tree		
254	Verbenaceae	<i>Salvia plebeia</i>				
255	Verbenaceae	<i>Tectona grandis</i>	Teak	Tree		
256	Verbenaceae	<i>Vitex negundo</i>	Simali	Shrub		
257	Vitaceae	<i>Ampelocissus latifolia</i>		Climber		
258	Vitaceae	<i>Ampleocissus sikkimensis</i>		Climber		
259	Vitaceae	<i>Cayratia trifolia</i>		Climber		
260	Vitaceae	<i>Cissus repens</i>	Purani	Climber		
261	Vitaceae	<i>Vitis Jacquemontii</i>		Climber		
262	Zingiberaceae	<i>Costus speciosus</i>				
263	Zingiberaceae	<i>Hedychium gardnerianum</i>				
264	Zygophyllaceae	<i>Tribulus terrestris</i>	Gokhur	Herb		

(Source: Field survey June 2013)

## Annex-II

### Mammals of BaNP

S.N.	Order	Family	Scientific name	Common name	Local name	Conservation status			Remarks
						NPWC Act	CITES Appendix	IUCN Red data	
1	Artiodactyla	Cervidae	<i>Axis axis</i>	Spotted deer	Chittal				
2		Cervidae	<i>Axis porcinus</i>	Hog deer	Laguna				
3		Bovidae	<i>Boselaphus tragocamelus</i>	Blue bull	Nilgai				
4		Cervidae	<i>Cervus unicolor</i>	Sambar	Jarayo				
5		Cervidae	<i>Muntiacus munitiac</i>	Barking deer	Rato mriga/ Ratuwa				
6		Bovidae	<i>Nemorhaedus goral</i>	Ghoral	Ghoral		I		
7		Suidae	<i>Sus scrofa</i>	Wild boar	Bandel				
8		Bovidae	<i>Tetracerus quadricornis</i>	Four Horned Antelope	Chouka	P	III		
9	Carnivora	Canidae	<i>Canis aureus</i>	Jackal	Syal				
10		Canidae	<i>Cuon alpinus</i>	Wild dog	Ban kukur		II		
11		Felidae	<i>Felis bengalensis</i>	Leopard cat	Chari bagh	P	II		
12		Felidae	<i>Felis chaus</i>	Jungle cat	Ban biralo		II		
13			<i>Herpestes auropunctatus</i>	Common Mongoose	Nyauri				
14			<i>Herpestes edwardsii</i>	Small Mongoose	Nyauri				
15			<i>Prionodon pardicolor</i>	Spotted lingsang	Silu Biralo	P	I		
16		Canidae	<i>Hyayna hyaena</i>	Striped Hyeana	Hundar	P			
17			<i>Lutra perspicillata</i>	Smooth otter	Oth				
18		Ursidae	<i>Melurus ursinus</i>	Sloth Bear	Bhalu		I		

S.N.	Order	Family	Scientific name	Common name	Local name	Conservation status				Remarks
						NPWC Act	CITES Appendix	IUCN Red data		
19		Felidae	<i>Panthera pardus</i>	Leopard	Chituwa		I			
20		Felidae	<i>Panthera tigris</i>	Tiger	Bagh	P	I	E		
21		Viverriadae	<i>Viverra indica</i>	Small Civet	Sano malsapro					
22		Viverriadae	<i>Viverra zibetha</i>	Large Civet	Malsapro					
23		Canidae	<i>Vulpes bengalensis</i>	Indian Fox	Phyauro					
24	Chiroptera		<i>Cynopterus sphinx</i>	Short nosed fruit bat	Chamero					
25			<i>Pipistrellus coromendra</i>	Indian pipistrelle	Chamero					
26			<i>Scotophilus heath</i>	Yellow house bat	Chamero					
27	Primates		<i>Macaca mulatta</i>	Rhesus macaque	Rato Bandar		II			
28			<i>Presbytis entellus</i>	Common langur	Langur		I			
29	Rodentia		<i>Funambulus pennati</i>	Palm Squirrel	Lokharke					
30			<i>Hystrix indica</i>	Porcupine	Dumsi					
31			<i>Petaurista petaurista</i>	Flying squirrel	Koirala					
32			<i>Rattus rattus</i>	House rat	Muso					
33	Proboscidea	Elephantidae	<i>Elephas maximus</i>	Wild Elephant	Hatti	P	I			
34	Pholidota	Manidae	<i>Manis crassicaudata</i>	Pangolin (Indian)	Salak	P	II			

Most of the species has not been marked under IUCN redbook column above

## Annex-III

### Birds of BaNP

S.N.	Common Name	Scientific Name	Nepali Name	Status	Reference
GALLIFORMES					
Phasianidae					
1	Black Francolin	<i>Francolinus francolinus</i>	कालो तित्रा	r2	1
2	Grey Francolin #	<i>Francolinus pondicerianus</i>	कपिञ्जल तित्रा	r3	1
3	Red Junglefowl	<i>Gallus gallus</i>	लुईचे	r1	1
4	Indian Peafowl	<i>Pavo cristatus</i>	मुजुर	r1	1
ANSERIFORMES					
Anatidae					
5	Ruddy Shelduck	<i>Tadorna ferruginea</i>	चखेवा चखेवी	w1	1
6	Northern Pintail #	<i>Anas acuta</i>	सुईरोपुच्छ	w2	7
7	Goosander	<i>Mergus merganser</i>	मणितुण्डक	w2	1
CICONIIFORMES					
Ciconiidae					
8	Asian Openbill #	<i>Anastomus oscitans</i>	घुंगीफोर गरुड	r3	1
9	Woolly-necked Stork *	<i>Ciconia episcopus</i>	लोभीपापी गरुड	r4	1
Threskiornithidae					
10	Red-naped Ibis	<i>Pseudibis papillosa</i>	कर्रा साँवरी	r3	1
Ardeidae					
11	Little Egret	<i>Egretta garzetta</i>	सानो सेतो बकुल्ला	r1	1
12	Great Egret	<i>Casmerodius albus</i>	ठुलो सेतो बकुल्ला	r2	1
13	Intermediate Egret	<i>Mesophoyx intermedia</i>	मभौला सेतो बकुल्ला	r2	1
14	Cattle Egret	<i>Bubulcus ibis</i>	वस्तु बकुल्ला	r1	1
15	Indian Pond Heron	<i>Ardeola grayii</i>	आसकोटे बकुल्ला	r1	1
16	Little Heron	<i>Butorides striatus</i>	छोटाखुट्टे बकुल्ला	r3	1
17	Grey Heron	<i>Ardea cinerea</i>	फुस्रो बकुल्ला	r3	2
PELECANIFORMES					
Phalacrocoracidae					
18	Little Cormorant	<i>Phalacrocorax niger</i>	सानो जलेवा	r2	2
19	Great Cormorant	<i>Phalacrocorax carbo</i>	जलेवा	w1	1

S.N.	Common Name	Scientific Name	Nepali Name	Status	Reference
FALCONIFORMES					
Falconidae					
20	Common Kestrel	<i>Falco tinnunculus</i>	बौडाइ	r2	1
21	Peregrine Falcon	<i>Falco peregrinus</i>	शाही बाज	r3	8
Accipitridae					
22	Oriental Honey Buzzard	<i>Pernis ptilorhyncus</i>	मधुहा	r2	1
23	Black-winged Kite	<i>Elanus caeruleus</i>	मुसे चील	r3	1
24	Black Kite	<i>Milvus migrans</i>	कालो चील	r3	1
25	Egyptian Vulture * #	<i>Neophron percnopterus</i>	सेतो गिद्ध	r4	2
26	White-rumped Vulture*#	<i>Gyps bengalensis</i>	डंगर गिद्ध	r3	9
27	Himalayan Vulture #	<i>Gyps himalayensis</i>	हिमाली गिद्ध	w3	1
28	Eurasian Griffon	<i>Gyps fulvus</i>	खैरो गिद्ध	w4	9
29	Crested Serpent Eagle	<i>Spilornis cheela</i>	काकाकुल	r1	1
30	Shikra	<i>Accipiter badius</i>	शिक्रा	r2	1
31	White-eyed Buzzard	<i>Butastur teesa</i>	जमल श्येनबाज	r2	2
32	Steppe Eagle *#	<i>Aquila nipalensis</i>	गोमायु महाचील	w4	2
33	Booted Eagle	<i>Hieraetus pennatus</i>	काँधचन्द्र चील	w3	1
34	Changeable Hawk Eagle	<i>Spizaetus cirrhatus</i>	शदलचील	r3	2
GRUIFORMES					
Rallidae					
35	White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	सिमकुखुरा	r2	1
CHARADRIIFORMES					
Burhinidae					
36	Indian Thick-knee	<i>Burhinus indicus</i>	बगरबट्टाई	r3	1
Charadriidae					
37	Little Ringed Plover	<i>Charadrius dubius</i>	लघु राजपुत्रिका	w2	1
38	Kentish Plover	<i>Charadrius alexandrinus</i>	अलकचन्द्र राजपुत्रिका	w3	1
39	Yellow-wattled Lapwing #	<i>Vanellus malarbaricus</i>	दोयम हुट्टियाउ	r4	2
40	River Lapwing	<i>Vanellus duvaucelii</i>	खोले हुट्टियाउ	r3	1
41	Red-wattled Lapwing	<i>Vanellus indicus</i>	हुट्टियाउँ	r2	1
Scolopacidae					
42	Common Greenshank	<i>Tringa nebularia</i>	टिमटिमा	w2	1
43	Green Sandpiper	<i>Tringa ochropus</i>	रुख सुडसुडिया	w2	1
44	Common Sandpiper	<i>Actitis hypoleucos</i>	चञ्चले सुडसुडिया	w2	1

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Glareolidae					
45	Small Pratincole	<i>Glareola lactea</i>	पानीगौथली	r3	2
COLUMBIFORMES					
Columbidae					
46	Common Pigeon	<i>Columba livia</i>	मलेवा	r1	1
47	Oriental Turtle Dove	<i>Streptopelia orientalis</i>	तामे ढुकुर	r2	1
48	Laughing Dove	<i>Streptopelia senegalensis</i>	धुसर ढुकुर	r4	8
49	Spotted Dove	<i>Streptopelia chinensis</i>	कुले ढुकुर	r1	1
50	Red Collared Dove	<i>Streptopelia tranquebarica</i>	सानोतामे ढुकुर	r1	2
51	Eurasian Collared Dove	<i>Streptopelia decaocto</i>	कण्ठे ढुकुर	r1	1
52	Emerald Dove	<i>Chalcophaps indica</i>	हारील ढुकुर	r2	1
53	Orange-breasted Green Pigeon	<i>Treron bicincta</i>	सुन्तलेछाती हलेसो	r3	2
54	Yellow-footed Green Pigeon	<i>Treron phoenicoptera</i>	हलेसो	r3	2
PSITTACIFORMES					
Psittacidae					
55	Alexandrine Parakeet	<i>Psittacula eupatria</i>	कर्ना सुगा	r1	1
56	Rose-ringed Parakeet	<i>Psittacula krameri</i>	कण्ठे सुगा	r1	1
57	Slaty-headed Parakeet	<i>Psittacula himalayana</i>	मदना सुगा	r3	1
58	Plum-headed Parakeet	<i>Psittacula cyanocephala</i>	टुइंसी सुगा	r1	1
CUCULIFORMES					
Cuculidae					
59	Common Hawk Cuckoo	<i>Hierococcyx varius</i>	बीउ कृहियो	r2	1
60	Indian Cuckoo	<i>Cuculus micropterus</i>	काफल पाक्यो	s2	2
61	Eurasian Cuckoo	<i>Cuculus canorus</i>	कुक्कु कोइली	s3	2
62	Banded Bay Cuckoo	<i>Cacomantis sonneratii</i>	धर्के खैरो कोइली	r3	2
63	Grey-bellied Cuckoo	<i>Cacomantis passerinus</i>	फुस्रो सानो कोइली	s3	1
64	Asian Koel	<i>Eudynamys scolopacea</i>	कोइली	r2	2
65	Green-billed Malkoha	<i>Phaenicophaeus tristis</i>	हरित मालकौवा	r3	1
66	Sirkeer Malkoha	<i>Phaenicophaeus leschenaultii</i>	न्याउरी मालकौवा	r2	2
67	Greater Coucal	<i>Centropus sinensis</i>	ढोडे गोकुल	r1	1
STRIGIFORMES					
Strigidae					
68	Oriental Scops Owl	<i>Otus sunia</i>	लोखर्के उलुक	r3	2
69	Asian Barred Owlet	<i>Glaucidium cuculoides</i>	ठूलो डुन्डुल	r3	1

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70	Jungle Owlet	<i>Glaucidium radiatum</i>	डुडुल	r1	1
71	Spotted Owlet	<i>Athene brama</i>	कोचलगाँडे लाटो कोसेरो	r1	2
72	Brown Hawk Owl	<i>Ninox scutulata</i>	कालपेचक	r2	1
CAPRIMULGIFORMES					
Caprimulgidae					
73	Large-tailed Nightjar	<i>Caprimulgus macrurus</i>	लामपुच्छे चैतेचरा	r2	2
74	Savanah Nightjar	<i>Caprimulgus affinis</i>	चुइयाँ चैतेचरा	r2	1
APODIFORMES					
Apodidae					
75	Himalayan Swiftlet	<i>Collocalia brevirostris</i>	चीचिका गौथली	m	1
76	Asian Palm-Swift	<i>Cypsiurus balasiensis</i>	थाकल गौथली	r3	2
77	Alpine Swift	<i>Tachymarptis melba</i>	बतासी गौथली	r4	1
78	House Swift	<i>Apus affinis</i>	फिरफिरे घरगौथली	r1	1
79	Crested Treeswift	<i>Hemiprocne coronata</i>	जुरे गौथली	r2	1
CORACIIFORMES					
Upupidae					
80	Common Hoopoe	<i>Upupa epops</i>	फाप्पे चरा	w3	1
Coraciidae					
81	Indian Roller	<i>Coracias benghalensis</i>	ठेउवा	r2	1
82	Dollarbird	<i>Eurystomus orientalis</i>	लालचुच्चे ठेउवा	s3	2
Alcedinidae					
83	Common Kingfisher	<i>Alcedo atthis</i>	सानो माटीकोरे	r2	1
84	Stork-billed Kingfisher	<i>Pelargopsis capensis</i>	ठूलो माटीकोरे	r2	1
85	White-throated Kingfisher	<i>Halcyon smyrnensis</i>	सेतोक्ण्ठे माटीकोरे	r1	1
86	Crested Kingfisher	<i>Megaceryle lugubris</i>	ठूलो छिरबिरे माटीकोरे	r4	1
87	Pied Kingfisher	<i>Ceryle rudis</i>	छिरबिरे माटीकोरे	r2	1
Meropidae					
88	Blue-bearded Bee-eater	<i>Nyctornis athertoni</i>	मधुमक्षी भक्षका	r3	1
89	Green Bee-eater	<i>Merops orientalis</i>	मुरलीचरा	r1	1
90	Blue-tailed Bee-eater	<i>Merops philippinus</i>	नीलपुच्छे मुरलीचरा	s2	2
91	Chestnut-headed Bee-eater	<i>Merops leschenaulti</i>	कटुसटाउके मुरलीचरा	s2	2
Bucerotidae					
92	Indian Grey Hornbill	<i>Ocyrceros birostris</i>	सानो धनेश	r2	1
93	Oriental Pied Hornbill	<i>Anthracoceros albirostris</i>	कालो धनेश	r2	1

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94	Great Hornbill #	<i>Buceros bicornis</i>	राजधनेश	r4	10
PICIFORMES					
Ramphastidae					
95	Great Barbet	<i>Megalaima virens</i>	न्याउली	r4	2
96	Brown-headed Barbet	<i>Megalaima zeylanica</i>	कुमछिर्के कुथुर्के	r1	1
97	Lineated Barbet	<i>Megalaima lineata</i>	छिर्के कुथुर्के	r2	1
98	Blue-throated Barbet	<i>Megalaima asiatica</i>	कुथुर्के	r3	1
99	Coppersmith Barbet	<i>Megalaima haemacephala</i>	मिलचरा	r3	1
Picidae					
100	Speckled Piculet	<i>Picumnus innominatus</i>	थोप्ले ससिया	r3	2
101	Brown-capped Pygmy Woodpecker	<i>Dendrocopos nanus</i>	पुन्टे काष्ठकुट	r3	1
102	Grey-capped Pygmy Woodpecker	<i>Dendrocopos canicapillus</i>	फुस्रोटाउके काष्ठकुट	r2	1
103	Brown-fronted Woodpecker	<i>Dendrocopos auriceps</i>	खैरोटाउके काष्ठकुट	r4	1
104	Fulvous-breasted Woodpecker	<i>Dendrocopos macei</i>	काष्ठकुट	r3	1
105	Yellow-crowned Woodpecker	<i>Dendrocopos mahrattensis</i>	पहेलोटाउके काष्ठकुट	r3	1
106	Rufous Woodpecker	<i>Celeus brachyurus</i>	सानो तामे लाहाँचे	r4	2
107	Lesser Yellownappe	<i>Picus chlorolophus</i>	सुनजुरे काठफोर	r3	1
108	Streak-throated Woodpecker	<i>Picus xanthopygaeus</i>	कत्ले काठफोर	r3	2
109	Grey-headed Woodpecker	<i>Picus canus</i>	कालोगर्दने काठफोर	r2	1
110	Himalayan Goldenback	<i>Dinopium shorii</i>	तीनऔले लाहाँचे	r1	1
111	Lesser Goldenback	<i>Dinopium benghalense</i>	कालोढाडे लाहाँचे	r2	2
112	Greater Goldenback	<i>Chrysocolaptes lucidus</i>	गर्दनथोप्ले लाहाँचे	r2	1
113	Great Slaty Woodpecker * #	<i>Mulleripicus pulverulentus</i>	राजलाहाँचे	r4	1
PASSERIFORMES					
Pittidae					
114	Indian Pitta	<i>Pitta brachyura</i>	गाजले पिट्टा	s3	2
Campephagidae					
115	Large Cuckooshrike	<i>Coracina macei</i>	लटुशक विरहीचरी	r1	1
116	Black-winged Cuckooshrike	<i>Coracina melaschistos</i>	कालो विरहीचरी	r2	1
117	Small Minivet	<i>Pericrocotus cinnamomeus</i>	सानो रानीचरी	r1	1

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118	Long-tailed Minivet	<i>Pericrocotus ethologus</i>	लामपुच्छे चैतेचरा	r2	1
119	Scarlet Minivet	<i>Pericrocotus flammeus</i>	रानीचरी	r1	1
120	Bar-winged Flycatcher-shrike	<i>Hemipus picatus</i>	आसकोटे चरी	r1	1
121	Large Woodshrike	<i>Tephrodornis gularis</i>	ठूलो टेन्था	r2	7
122	Common Woodshrike	<i>Tephrodornis pondicerianus</i>	टेन्था	r1	1
Artamidae					
123	Ashy Woodswallow	<i>Artamus fuscus</i>	भिथुन	r2	1
Aegithinidae					
124	Common Iora	<i>Aegithina tiphia</i>	सुसेलीचरी	r1	1
Laniidae					
125	Brown Shrike	<i>Lanius cristatus</i>	खैरो भद्राई	w3	1
126	Bay-backed Shrike	<i>Lanius vittatus</i>	चित्रक भद्राई	r4	2
127	Long-tailed Shrike	<i>Lanius schach</i>	भद्राई	r2	1
128	Grey-backed Shrike	<i>Lanius tephronotus</i>	हिमाली भद्राई	w2	1
Dicruridae					
129	Black Drongo	<i>Dicrurus macrocercus</i>	कालो चिबे	r1	1
130	Ashy Drongo	<i>Dicrurus leucophaeus</i>	ध्वाँसे चिबे	r2	1
131	White-bellied Drongo	<i>Dicrurus caerulescens</i>	सेतोपेटे चिबे	r1	1
132	Spangled Drongo	<i>Dicrurus hottentottus</i>	केशराज चिबे	r1	1
133	Greater Racket-tailed Drongo	<i>Dicrurus paradiseus</i>	भीमराज चिबे	r1	1
Oriolidae					
134	Indian Golden Oriole	<i>Oriolus (oriolus) kundoo</i>	गाजले सुनचरी	s3	2
135	Black-hooded Oriole	<i>Oriolus xanthornus</i>	कालोटाउके सुनचरी	r1	1
Rhipiduridae					
136	Yellow-bellied Fantail	<i>Rhipidura hypoxantha</i>	पहेँलो मारुनीचरी	r3	1
137	White-throated Fantail	<i>Rhipidura albicollis</i>	नक्कले मारुनीचरी	r2	2
138	White-browed Fantail	<i>Rhipidura aureola</i>	कुमथोप्ले मारुनीचरी	r3	1
Monarchidae					
139	Black-naped Monarch	<i>Hypothymis azurea</i>	राजचरी	r2	1
140	Asian Paradise-flycatcher	<i>Terpsiphone paradisi</i>	स्वर्गाचरी	s2	2
Corvidae					
141	Red-billed Blue Magpie	<i>Urocissa erythrorhyncha</i>	स्यालपोथरी लामपुच्छे	r2	1
142	Rufous Treepie	<i>Dendrocitta vagabunda</i>	कोकले	r1	1

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143	House Crow	<i>Corvus splendens</i>	घर काग	r1	1
144	Large-billed Crow	<i>Corvus macrorhynchos</i>	कालो काग	r1	1
Paridae					
145	Great Tit	<i>Parus major</i>	चिचिलकोटे	r1	1
146	Black-lored Tit	<i>Parus xanthogenys</i>	पाण्डु चिचिलकोटे	r3	1
Hirundinidae					
147	Plain Martin	<i>Riparia paludicola</i>	भित्तेगौथली	r1	1
148	Barn Swallow	<i>Hirundo rustica</i>	घर गौथली	r1	1
149	Red-rumped Swallow	<i>Hirundo daurica</i>	गेरुकटी गौथली	r2	1
Alaudidae					
150	Rufous-winged Lark	<i>Mirafra assamica</i>	भारद्वाज	r2	1
151	Ashy-crowned Sparrow Lark	<i>Eremopterix grisea</i>	चशमे भारद्वाज	r2	1
152	Sand Lark	<i>Calandrella raytal</i>	बगर भारद्वाज	r1	1
153	Crested Lark	<i>Galerida cristata</i>	जुरे भारद्वाज	r3	1
154	Oriental Skylark	<i>Alauda gulgula</i>	ब्रह्मीचटी	r3	2
Pycnonotidae					
155	Black-crested Bulbul	<i>Pycnonotus melanicterus</i>	कालाकल्की जुरेली	r2	1
156	Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	श्वेतवक्ष जुरेली	r1	2
157	Himalayan Bulbul	<i>Pycnonotus leucogenys</i>	जुल्फे जुरेली	r2	1
158	Red-vented Bulbul	<i>Pycnonotus cafer</i>	जुरेली	r1	1
159	Black Bulbul	<i>Hypsipetes leucocephalus</i>	बाख्रे जुरेली	r2	1
Cisticolidae					
160	Zitting Cisticola	<i>Cisticola juncidis</i>	फिर्फिरे	r2	1
161	Striated Prinia	<i>Prinia criniger</i>	सुया घाँसेफिस्टो	r2	2
162	Grey-breasted Prinia	<i>Prinia hodgsonii</i>	फुस्रोछाती घाँसे फिस्टो	r1	1
163	Jungle Prinia	<i>Priniasylvatica</i>	जङ्गल घाँसेफिस्टो	r3	1
164	Ashy Prinia	<i>Prinia socialis</i>	टुणुक् घाँसेफिस्टो	r3	1
165	Plain Prinia	<i>Prinia inornata</i>	भाँक्री घाँसेफिस्टो	r2	1
Sylviidae					
166	Blyth's Reed Warbler	<i>Acrocephalus dumetorum</i>	ट्याकट्याके	r1	2
167	Thick-billed Warbler	<i>Acrocephalus aedon</i>	मोटोठुँडे ट्याकट्याके	w2	1

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168	Common Tailorbird	<i>Orthotomus sutorius</i>	पातसिउने फिस्टो	r1	1
169	Common Chiffchaff	<i>Phylloscopus collybita</i>	चिपूचिपे फिस्टो	w2	1
170	Tickell's Leaf Warbler	<i>Phylloscopus affinis</i>	पीतोदर फिस्टो	w3	1
171	Ashy-throated Warbler	<i>Phylloscopus maculipennis</i>	फुस्रोकण्ठे फिस्टो	w3	1
172	Yellow-browed Warbler	<i>Phylloscopus inornatus</i>	हरित फिस्टो	wm	1
173	Hume's Leaf Warbler	<i>Phylloscopus humei</i>	चञ्चले फिस्टो	w2	1
174	Greenish Warbler	<i>Phylloscopus trochiloides</i>	जीवल फिस्टो	w1	1
175	Western Crowned Warbler	<i>Phylloscopus occipitalis</i>	ठूलो तालुधर्के फिस्टो	m	2
176	Grey-hooded Warbler	<i>Seicercus xanthoschistos</i>	तुमुलकारी फिस्टो	w3	1
Timaliidae					
177	White-crested Laughingthrush	<i>Garrulax leucolophus</i>	हिउँजुरे तोरीगाँडा	r3	2
178	Puff-throated Babbler	<i>Pellorneum ruficeps</i>	थोप्ले भ्याकुर	r1	1
179	Striped Tit Babbler	<i>Macronous gularis</i>	पीतोदर फिस्टे भ्याकुर	r1	1
180	Jungle Babbler	<i>Turdoides striatus</i>	बगाले भ्याकुर	r1	1
181	White-bellied Erpornis	<i>Erpornis zantholeuca</i>	सेतोपेटे जुरेचरा	r3	2
Zosteropidae					
182	Oriental White-eye	<i>Zosterops palpebrosus</i>	कांकीर	r1	1
Sittidae					
183	Chestnut-bellied Nuthatch	<i>Sitta castanea</i>	कटुसे मट्टा	r1	1
184	Velvet-fronted Nuthatch	<i>Sitta frontalis</i>	मखमली मट्टा	r1	1
185	Wallcreeper	<i>Tichodroma muraria</i>	मुरारी पुतलीचरा	w4	1
Sturnidae					
186	Chestnut-tailed Starling	<i>Sturnus malabaricus</i>	फुस्रोटाउके सारौ	r1	2
187	Brahminy Starling	<i>Sturnus pagodarum</i>	जुरे सारौ	r3	2
188	Common Myna	<i>Acridotheres tristis</i>	डाङ्गे रुपी	r1	1
189	Jungle Myna	<i>Acridotheres fuscus</i>	वन रुपी	r2	1
Turdidae					
190	Blue Whistling Thrush	<i>Myophonus caeruleus</i>	कल्चौडे	r2	1
191	Scaly Thrush	<i>Zoothera dauma</i>	गोब्रे चाँचर	w3	1
192	Tickell's Thrush	<i>Turdus unicolor</i>	फुस्रे चाँचर	w4	2
193	Grey-winged Blackbird	<i>Turdus boulboul</i>	मदना चाँचर	w4	1
Muscicapidae					
194	Asian Brown Flycatcher	<i>Muscicapa dauurica</i>	धुसर अर्जुनक	m	2

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195	Rufous-gorgetted Flycatcher	<i>Ficedula strophciata</i>	सेतोटिके अर्जुनक	w3	1
196	Taiga Flycatcher	<i>Ficedula albicilla</i>	लालकण्ठे अर्जुनक	r2	1
197	Snowy-browed Flycatcher	<i>Ficedula hyperythra</i>	सेतोआँखीभौ अर्जुनक	r4	1
198	Verditer Flycatcher	<i>Eumyias thalassina</i>	नीलतुथो अर्जुनक	w2	1
199	Small Niltava	<i>Niltava macgrigoriae</i>	सानो नीलतभा	r4	1
200	Pale-chinned Flycatcher	<i>Cyornis poliogenys</i>	नौनीकण्ठे अर्जुनक	r3	1
201	Blue-throated Flycatcher	<i>Cyornis rubeculoides</i>	नीलकण्ठे अर्जुनक	m	2
202	Tickell's Blue Flycatcher	<i>Cyornis tickelliae</i>	नीलो अर्जुनक	r4	1
203	Grey-headed Canary Flycatcher	<i>Culicicapa ceylonensis</i>	चञ्चले अर्जुनक	w3	1
204	Bluethroat	<i>Luscinia svecica</i>	भूमिचर नीलकण्ठ	w3	2
205	Oriental Magpie Robin	<i>Copsychus saularis</i>	धोबिनी चरा	r1	1
206	White-rumped Shama	<i>Copsychus malabaricus</i>	श्यामा	r2	1
207	Indian Robin	<i>Saxicoloides fulicata</i>	देवी श्यामा	r1	1
208	BlackRedstart	<i>Phoenicurus ochruros</i>	ध्याप्ची खञ्जरी	w2	1
209	White-capped Water Redstart	<i>Chaimarrornis leucocephalus</i>	सेतोटाउके जलखञ्जरी	r3	1
210	Plumbeous Water Redstart	<i>Rhyacornis fuliginosus</i>	नीलाम्बर जलखञ्जरी	r3	1
211	Black-backed Forktail	<i>Enicurus immaculatus</i>	कालोहाडे खोलेधोबिनी	r4	1
212	Hodgson's Bushchat * #	<i>Saxicola insignis</i>	सेतोकण्ठे धिप्सी	w5	1
213	Common Stonechat	<i>Saxicola torquata</i>	भेकभेक भ्याप्सी	r2	1
214	Pied Bushchat	<i>Saxicola caprata</i>	काले भ्याप्सी	r2	1
215	Grey Bushchat	<i>Saxicola ferrea</i>	हिमाली भ्याप्सी	r3	1
<b>Irenidae</b>					
216	Golden-fronted Leafbird	<i>Chloropsis aurifrons</i>	कृष्णकण्ठे हरितचरी	r3	1
<b>Dicaeidae</b>					
217	Thick-billed Flowerpecker	<i>Dicaeum agile</i>	मोटोठुँडे पुष्पकोकिल	r3	1
218	Pale-billed Flowerpecker	<i>Dicaeum erythrorhynchos</i>	रातोठुँडे पुष्पकोकिल	r2	1
219	Plain Flowerpecker	<i>Dicaeum concolor</i>	समरुप पुष्पकोकिल	r2	2
<b>Nectariniidae</b>					
220	Purple Sunbird	<i>Nectarinia asiatica</i>	कालोबुङ्गेचरा	r2	1
221	Crimson Sunbird	<i>Aethopyga siparaja</i>	सिपराजा बुङ्गेचरा	r3	1
<b>Passeridae</b>					
222	House Sparrow	<i>Passer domesticus</i>	घर भँगेरा	r1	1

S.N.	Common Name	Scientific Name	Nepali Name	Status	Reference
223	Chestnut-shouldered Petronia	<i>Petronia xanthocollis</i>	पीतकण्ठे भँगेरा	r1	1
Ploceidae					
224	Baya Weaver	<i>Ploceus philippinus</i>	बया तोपचरा	r2	1
Estrildidae					
225	Scaly-breasted Munia	<i>Lonchura punctulata</i>	कोटेरो मुनियाँ	r2	1
Motacillidae					
226	White Wagtail	<i>Motacilla alba</i>	सेतो टिकटिके	r1	1
227	White-browed Wagtail	<i>Motacilla maderaspatensis</i>	खोले टिकटिके	r2	1
228	Yellow Wagtail	<i>Motacilla flava</i>	पहेलो टिकटिके	m	2
229	Grey Wagtail	<i>Motacilla cinerea</i>	फुस्रो टिकटिके	w3	1
230	Paddyfield Pipit	<i>Anthus rufulus</i>	आली चुइयाँ	r1	1
231	Long-billed Pipit	<i>Anthus similis</i>	लामोठुँडे चुइयाँ	w3	1
232	Tree Pipit	<i>Anthus trivialis</i>	बगाले चुइयाँ	w3	1
233	Olive-backed Pipit	<i>Anthus hodgsoni</i>	रुख चुइयाँ	w1	1
234	Rosy Pipit	<i>Anthus roseatus</i>	गुलाफीकण्ठे चुइयाँ	w2	2
Emberizidae					
235	Crested Bunting	<i>Melophus lathami</i>	जुरे बगेडी	w3	1
236	Pine Bunting	<i>Emberiza leucocephalos</i>	सल्ले बगेडी	w5	1

Source: Birds of BaNP (2016)

#### Key to the codes

- \* Globally Threatened
- # Nationally Threatened
- r Resident
- s Summer migrant
- w Winter migrant
- m Passage migrant
- v Vagrant
- 1 Common
- 2 Fairly common
- 3 Uncommon
- 4 Rare
- 5 Very rare

## Annex-IV

### Herpeto-fauna of BaNP

S. N.	Order	Family	Scientific name	Common name	Local name	Conservation status			Remarks
						NPWC Act	CITES	IUCN Red data	
<b>A</b>	<b>Reptiles</b>								
1	Sauria	Agamida	<i>Agama tubercula</i>	Tuberculate agama	Agama				
2		Cordylidae	<i>Colotes versicolor</i>	Garden lizard	Chheparo				
3	Serpentes	Pythonidae	<i>Python molurus molurus</i>	Python	Ajingar	P	I		
4		Colubridae	<i>Boiga trigonata</i>	Common cat snake	Sarpa				
5			<i>Dendrelaphis tristis</i>	Tree snake	Sarpa				
6			<i>Enhydris steboldi</i>	Stebold's smooth water snake	Pani sarpa				
7			<i>Lycodon aulicus</i>	Common wolf-snake	Bwase- sarpa				
8			<i>Lycodon jara</i>	Jara wolf-snake	Bwase-sarpa				
9			<i>Ptyas mucosa</i>	Oriental rat snake	Dhaaman		II		
10			<i>Nenochrophis piscator</i>	Chequerred keelback	Aandho sarpa				
11	Crocodylia	Crocodylidae	<i>Crocodylus palustris</i>	Mugger crocodile	Mugger Gohi		I		
12	Serpentes	Elapidae	<i>Bungarus caeruleus</i>	Common krait	Karet				
13			<i>Naja naja</i>	Cobra	Goman		II		
14	Testudines	Geoemydiidae	<i>Pangshura smithii smithii (Kachuga sonithi)</i>	Brown-roofed turtle	Khairo thotari		II		

S. N.	Order	Family	Scientific name	Common name	Local name	Conservation status			Remarks
						NPWC Act	CITES	IUCN Red data	
15	Sauria	Gekkonidae	<i>Hemidactylus brokii</i>	Brook's housegeek	Mausuli				
16	Sauria	Scincidae	<i>Mabuya carinata</i>	Skink	Bhale mugro				
17			<i>Mabuya macularia</i>	Skink	Bhale mugro				
18			<i>Riopa punctata</i>	Skink	Bhale mugro				
19			<i>Scincelia ladacense</i>	Skink	Bhale mugro				
20	Serpentes	Typhlopidae	<i>Ramphotyphlops braminus</i>	Grahminy blindsnake	Andho sarpa				
21			<i>Typhlops diardii</i>	Diard's blind snake	Andho sarpa				
22		Viperidae	<i>Vipera russelli</i>	Russel's viper	Viper				
23	Sauria	Varanidae	<i>Varanus flave cens</i>	Golden Monitor Lizard	Sun Gohoro	P	I		
24			<i>Varanus flave cens</i>	Monitor Lizard	Gohoro		I		
<b>B</b>	<b>Amphibians</b>								
1	Anura	Bufonidae	<i>Bufo melanuisticus</i>	Common Toad	Khasre bhyaguto				
2			<i>Bufo microtympaanum</i>	Southern hill toad	Pahadi khasre bhyaguto				
3			<i>Bufo stomaticus</i>	Marbled toad	Chhribire khasre bhyaguto				
4		Microhylidae	<i>Microhyla ornate</i>	Orange narrow-mouthed frog	Bhyaguto				
5		Dicroglossidae	<i>Rana cyanophylectis</i>	Stream frog	Paaha				
6			<i>Rana limnocharis</i>		Bhyaguto				
7			<i>Rana syhadrenis</i>		Bhyaguto				
8			<i>Hoplobatrachus tigerinus</i> ( <i>Rana tigrina</i> )	Bull frog	Bhyaguto				
9		Rhacophoridae	<i>Polypedates maculatus</i>	Churiam frog	Bhyaguto				

Pulished gazette and boundary

खण्ड ६० संख्या १३ नेपाल राजपत्र भाग ५ मिति २०६७/३/२८

नेपाल सरकार  
अर्थ मन्त्रालयको सूचना

नेपाल सरकारले विदेशी विनिमय (नियमित गर्ने) ऐन, २०१६ को वफा ११क. ले दिएको अधिकार प्रयोग गरी देहाय बन्धोबन्धको कसुरको जाँचबुझ र अनुसन्धान गर्नको लागि देहाय बन्धोबन्ध अनुसन्धान अधिकारी तोकिएको छः-

क) भारतीय रुपैयाँको हकमा एक लाखसम्म र अन्य विदेशी मुद्राको हकमा अगिरेको उलर दुई हजार बराबरको रकमसम्मको विदेशी विनिमय सम्बन्धी कसुरको सम्बन्धमा राजस्व अनुसन्धान इकाई कार्यालय इटहरी, पथलैया, बुटवल र कोहलपुरका प्रमुख अनुसन्धान अधिकृत,

ख) माथि खण्ड (क) मा उल्लिखित सिमान्दा बढी रकमको विदेशी विनिमय तथा विदेशी विनिमय सम्बन्धी अन्य कसुरका सम्बन्धमा राजस्व अनुसन्धान विभागका महानिदेशक वा निजले तोकिएको उप-महानिदेशक वा निदेशक।

खण्ड ५२, अतिरिक्ताङ्क ४४क, मिति २०५६।६।१ को नेपाल राजपत्र भाग ३ मा प्रकाशित यस मन्त्रालयको यस सम्बन्धी सूचना छरिज गरिएको छ।

आज्ञाने,  
शेखराज शर्मा  
सह-सचिव

(१)

सूचना विभाग, सिंहदरवार, काठमाडौंमा मद्रित मूद्रा ६ ५।  
गो.सं.नं. १६२०६७।१३

खण्ड ६० संख्या १३ नेपाल राजपत्र भाग ५ मिति २०६७/३/२८

चूरे पहाडको अग्लो डाँडोडाँडा नेपालगञ्ज सुर्खेत रोडको उत्तर-तर्फको डेउराली डाँडासम्म।

दक्षिणः बर्दिया राष्ट्रिय निकुञ्जको पूर्वी सिमाना नेपालगञ्ज सुर्खेत रोडको चिसापानीको पूर्व दक्षिण किनाराको पिलरबाट च्यामा-गाउँ, खडगवाडा, महादेवपुरी, बालापुर र ओभरी गाउँ तथा हस्तान्तरित सामुदायिक वनहरूलाई बाहिर पारी वन चेक पोष्टको पूर्वतर्फको पूर्व-पश्चिम राजमार्गसम्म जोडिने गरी निर्माण गरिने वनपथ, त्यहाँबाट पूर्व-पश्चिम राजमार्ग हुँदै मोपेरी, नाभर, बेरीया, चप्परगौडी गाउँ तथा सामुदायिक वन-हरूलाई बाहिर पारी पूर्व-पश्चिम राजमार्गको शिव खोला पुग्नसम्म।

सूचना २

नेपाल सरकारले राष्ट्रिय निकुञ्ज तथा वन्यजन्तु संरक्षण ऐन, २०२६ को वफा ३क. को उपवफा (१) ले दिएको अधिकार प्रयोग गरी बाँके राष्ट्रिय निकुञ्जको परिपारको बाँके, बाँझु र सल्यान जिल्लाको देहायको चार किल्लाभित्रको ३५३ वर्ग किलोमिटर क्षेत्रलाई बाँके राष्ट्रिय निकुञ्ज मध्यवर्ती क्षेत्र तोकिएको सूचना प्रकाशन गरिएको छः-

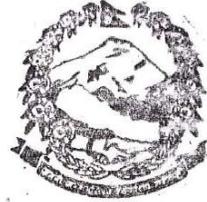
भारकिल्ला

बाँके जिल्ला अन्तर्गतको पूर्वी क्षेत्र

पूर्वः शिव खोला।  
पश्चिमः डेउरी खोला।  
उत्तरः बाँके राष्ट्रिय निकुञ्जको दक्षिणी सिमाना वनपथ।  
दक्षिणः राप्ती नदी र शिव खोला दोभानबाट राप्ती नदीलाई भित्र पारी खरी खोला र राप्ती खोलाको दोभानसम्म।

बाँके जिल्ला अन्तर्गतको पश्चिमी क्षेत्र

पूर्वः ओभरी गाउँजैर बाँके राष्ट्रिय निकुञ्जको वनपथ र पूर्व-पश्चिम राजमार्ग जोडिने बिन्दुबाट दक्षिणतर्फको राजमार्ग।  
पश्चिमः बर्दिया राष्ट्रिय निकुञ्ज मध्यवर्ती क्षेत्रको पूर्वी सिमाना।



नेपाल राजपत्र

नेपाल सरकारद्वारा प्रकाशित

खण्ड ६० काठमाडौं, असार २८ गते २०६७ साल (संख्या १३)

भाग ५

नेपाल सरकार

वन तथा सन्-संरक्षण मन्त्रालयको  
सूचना १

नेपाल सरकारले राष्ट्रिय निकुञ्ज तथा वन्यजन्तु संरक्षण ऐन, २०२६ को वफा ३ को उपवफा (१) ले दिएको अधिकार प्रयोग गरी बाँके जिल्लाको देहायको चार किल्लाभित्रको ५५० वर्ग किलोमिटर क्षेत्रलाई बाँके राष्ट्रिय निकुञ्ज घोषणा गरेको छः-

चार किल्ला

पूर्वः पूर्व-पश्चिम राजमार्गमा रहेको शिव खोलाको पुलदेखि उत्तरतर्फ बाँके र बाँझु जिल्लाको सिमाना शिव खोला र सो खोलाको मुहान हुँदै चूरे पहाडको धुरीसम्म।

पश्चिमः बाँदिया राष्ट्रिय निकुञ्जको पूर्वी सिमाना नेपालगञ्ज सुर्खेत रोडको चिसापानीदेखि उत्तरको डेउराली डाँडासम्म।

उत्तरः शिव खोलाको मुहान माथिको चूरे पहाडको धुरीबाट पश्चिमतर्फ बाँझु, सल्यान, बाँके र बर्दिया जिल्लाको सिमाना छुट्ट्याउने

खण्ड ६० संख्या १३ नेपाल राजपत्र भाग ५ मिति २०६७/३/२८

उत्तरः बाँके राष्ट्रिय निकुञ्जको दक्षिणी सिमाना वनपथ।

दक्षिणः ओभरीदेखि कोहलपुरसम्म पूर्व-पश्चिम राजमार्ग, कोहलपुरबाट रत्न राजमार्ग हुँदै बर्दिया राष्ट्रिय निकुञ्ज मध्यवर्ती क्षेत्रको पूर्वी सिमानासम्म।

बाँझु र सल्यान जिल्ला अन्तर्गतको उत्तरी क्षेत्र

पूर्वः चूरे पहाडको मुख्य धुरीबाट मलाइ खोलाको पानी डलोको धार हुँदै मलाइ खोला र बबई नदीको दोभानसम्म।

पश्चिमः बर्दिया राष्ट्रिय निकुञ्ज मध्यवर्ती क्षेत्रको पूर्वी सिमाना।

उत्तरः बबई नदी।

दक्षिणः बाँके राष्ट्रिय निकुञ्जको उत्तरी सिमाना।

सूचना ३

नेपाल सरकारले राष्ट्रिय निकुञ्ज तथा वन्यजन्तु संरक्षण ऐन, २०२६ को वफा ३ को उपवफा (१) ले दिएको अधिकार प्रयोग गरी बाँके जिल्लाको देहायको चार किल्लाभित्रको १,६०३ वर्ग किलोमिटर क्षेत्रलाई अर्को-नाम्ना संरक्षण क्षेत्र घोषणा गरेको छः-

चारकिल्ला

पूर्वः बाँझु जिल्लाको सिमाना।

पश्चिमः महाकाली नदीको भारतसँगको अन्तर्राष्ट्रिय सिमाना।

उत्तरः मित्रराष्ट्र चीनको स्वशासित क्षेत्र तिब्बतसँगको अन्तर्राष्ट्रिय सिमाना।

दक्षिणः सास्कु खोला र नौगाड खोला।

आज्ञाने,  
सुब्रह्मण्य जोशी  
नेपाल सरकारको निमित्त सचिव

(३)

**The boundary of the park and its BZ according to the Gazette is:**

***East***

From the east west highway upto the source of shivakhola till the ridge of churia of Banke and Dang district in the north

***West***

From the eastern boundary of Bardia National Park and Chisapani of Kohalpur-Surkhet road upto Deurali danda in the north.

***North***

The ridge of churia form the source of shiva khola and on the west the boundary of ridge of the hills that separate Dang, Salyan, Banke, Bardia upto the Deurali danda of Nepalgunj-Surkhet road on the north.

***South***

The boundary of Bardia National Park in the east which runs through east south corner of chisapani pillar of Nepalgunj-Surkhet road running through Chyamagaon, Khadbar, Mahadevpuri, Balapur, Obhari village and northern boundary of handed over Community Forests, fire line of eastern side of Post of district forest office, Gothari, Gavar, Bairiya, Chappargaudi village, outer boundary of Community Forests and Shivakhola of east-west highway.

**Boundary of BZ**

**Eastern side of Banke district**

East: Shiva khola

West: Khairee khola

North: Boundary of fireline of southern part of BaNP

South: Keeping confluence of Rapti and Shiva Khola inside running upto the confluence of Khairee khola and Rapti khola.

**Western side of Banke district**

East: Fireline of BaNP near Obhari village and southern highway where it meets east-west highway

West: Eastern boundary of BZ of Bardiya National Park (BNP)

North: Southern Fireline of BaNP

South: East-West highway of Obhari to Kohalpur, From Kohalpur to eastern boundary of BNP through Ratna Highway

**Northern area of Dang and Salyan**

East: Confluence of Malai stream and Babai river which originates from the ridge of churia hill and watershed of Malai stream

West: Eastern boundary of BZ of BNP

North: Babai river

South: northern boundary of BaNP

## Annex-VI

### Activities of BaNP with Budget

S.N.	Activities	Unit	No.	Rate	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total Amount
1	<b>Park protection</b>									
1.1	Construct 12 buildings (4 nos. to Park and 8 nos. to security units) at Hattidamar-Salyan, Ambasa, Kyureni, Mahadeva and Balapur to cover gap areas	No.	12	3500000	10500000	11025000	11550000	12075000		45150000
1.2	Construction of 2 buildings for Hattisar staffs	No.	2	7000000	7000000	7350000				14350000
1.3	Construction of food grain store house for elephant	No.	3	1500000	1500000	1575000	1650000			4725000
1.4	Construct 4 shed houses for elephants	No.	4	400000	800000	840000				1640000
1.5	Repair and maintenance of Park and security post buildings including accommodation facilities, power supplies	No.	25	250000	1250000	1312500	1375000	1437500	1500000	6875000
1.6	Repair and maintenance of building required in elephant stable,	No.	5	250000	250000	262500	275000	287500	300000	1375000
1.7	Boring for Drinking water (Head office, Kusum, Pragatinagar, Sutaiya and 3 places of hattisar)	Place	7	700000	1000000	1050000	550000	575000	600000	3775000
1.8	Construction for drinking water (Kyureni, Guiyabari, Malaijaljala)	Place	5	350000	250000	262500	275000			787500

S.N.	Activities	Unit	No.	Rate	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total Amount
1.9	Install CC cameras in the highway from Obhari to Kusum,	No.	25	35000		437500	437500			875000
1.10	Installation of CC camera for monitoring animals in the canal constructed by Sikta Project	No.	10	50000				287500	300000	587500
1.11	Install spy camera at strategic location	No.	10	35000	35000					35000
1.12	Maintenance of CC cameras in the highway	No.	15	5000	25000	25000	25000	25000	25000	125000
1.13	Liase with Telecommunication Company to establish 2 communication tower for effective communication	No.	2							0
1.14	Establish radio communication throughout the park,	No.	15	50000	150000	157500	165000	172500	180000	825000
1.15	Repair and maintenance of radio communication,	No.	15	10000	30000	31500	33000	34500	36000	165000
1.16	Construct 1 wildlife crossing bridge, 1 overpass or fly over and 2 underpass at strategic locations, in coordination with Department of Road (DoR), within the 25 km highway to facilitate wildlife movement									
1.17	Construct 50 km of all-weather road networks inside the park,	Km.	50	200000	2000000	2100000	2200000	2300000	2400000	11000000
1.18	Upgrade existing 30 Km of all-weather water shield road	Km.	30	300000	1800000	1890000	1980000	2070000	2160000	9900000

S.N.	Activities	Unit	No.	Rate	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total Amount
1.19	Upgrade the existing 50 km of all-weather road networks inside park	Km	50	150000	1500000	1575000	1650000	1725000	1800000	8250000
1.20	Maintenance of 125 km of fire line throughout the year	Km	125	50000	1250000	1312500	1375000	1437500	1500000	6875000
1.21	Construct 10 RCC watch towers in sensitive areas	No.	10	1000000	2000000	2100000	2200000	2300000	2400000	11000000
1.22	Repair and maintain existing 20 watch towers,	No.	20	200000	800000	840000	880000	920000	960000	4400000
1.23	Procure equipment required for elephant riding on a yearly basis	Times	2	600000	600000		660000			1260000
1.24	Provide hoddha, gaddi, and other materials for elephants	Times	2	500000		525000		575000		1100000
1.25	Provide food for all the elephants as per the required quota for each elephant	Years	5	2500000	2500000	2625000	2750000	2875000	3000000	13750000
1.26	Sweep area from the respective posts and locate leg traps of iron set used to trap wildlife especially tiger	Times	5	250000	250000	262500	275000	287500	300000	1375000
1.27	Camping operation during rainy season when most of the park's area becomes inaccessible by vehicle	Times	5	250000	250000	262500	275000	287500	300000	1375000
1.28	Continue real time SMART patrolling changing the time and route on random basis	Times	5	75000	75000	78750	82500	86250	90000	412500
1.29	Conduct camping and sweeping operation short/medium/long range patrol	Times	30	75000	450000	472500	495000	517500	540000	2475000

S.N.	Activities	Unit	No.	Rate	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total Amount
1.30	Support Community Based Anti-poaching Unit ( Chisapani, Kohalpur, Bharaiya, Dhakeri, Mahadeva- Shamshergunj, Sikta, Kusum, Rajkot, Nauwasta, Ghuiyabari)	years	5	100000	100000	105000	110000	115000	120000	550000
1.31	Develop a network of CBAPU and mobilize	Years	5	100000	100000	105000	110000	115000	120000	550000
1.32	Establish local informants around sensitive areas and procure information	Years	5	150000	150000	157500	165000	172500	180000	825000
1.33	Procure 20 night vision binoculars	No.	20	35000	140000	147000	154000	161000		602000
1.34	Procure 1 JCV, heavy equipment vehicle, to construct fire line including repair and maintenance	No.	1	7500000	3750000	3937500				7687500
1.35	Procure 2 four wheel vehicle for sectors for patrolling and park management.	No.	2	4500000				5175000	5400000	10575000
1.36	Procure cycles	No.	100	8000	160000	168000	176000	184000	192000	880000
1.37	Procure motorbikes	No.	5	250000	250000	262500	275000	287500	300000	1375000
1.38	Maintenance of vehicle, motorbikes, cycles	Years	5	300000	300000	315000	330000	345000	360000	1650000
1.39	Fuel for vehicle	Litre	10000	100	250000	262500	275000	287500	300000	1375000
	<b>Sub Total</b>				<b>41465000</b>	<b>43832750</b>	<b>32753000</b>	<b>37118250</b>	<b>25363000</b>	<b>180532000</b>
<b>2</b>	<b>Habitat management</b>									
2.1	Carry out inventory of all the grasslands recording of X Y location	No.	2	500000	1050000			575000		1625000

S.N.	Activities	Unit	No.	Rate	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total Amount
2.2	Study distribution and abundance of palatable grass species, recording XY coordinate and conduct regular monitoring of these species	No.	3	300000	300000		330000		360000	990000
2.3	Manage grassland by clearing 1000 hectares of woody species	Ha.	1000	40000	4800000	5040000	5280000	5520000	5760000	26400000
2.4	Carry out regular uprooting, drying and burning of 1500 ha of grassland to produce new flush of palatable and nutritious grasses and to reduce forest fire	Ha.	1000	15000	3000000	3150000	3300000	3450000	3600000	16500000
2.5	Organize khar-khadai for short period of time, if required, as grassland management intervention	Times	5	750000	750000	787500	825000	862500	900000	4125000
2.6	Create grassland of 50 m on the both sides of fire line by cleaning, removing shrubs and uprooting trees	Km	100	25000	500000	525000	550000	575000	600000	2750000
2.7	Clean the shrub up to 10 m on the both sides of 50 km highway to minimize risks of road accidents and kills	Km	50	25000	250000	262500	275000	287500	300000	1375000
2.8	Undertake inventory of Alien Invasive Species and Weeds recording XY coordinates both in land and water	Times	2	500000	500000				600000	1100000
2.9	Removal and control of invasive species in an area of 250 hectare in five years,	Ha.	250	100000	5000000	5250000	5500000	5750000	6000000	27500000

S.N.	Activities	Unit	No.	Rate	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total Amount
2.10	Undertake inventory of wetlands and water holds recording XY coordinates	Times	2	500000	500000				600000	1100000
2.11	Clean and remove weeds in wetlands	Times	5	750000	750000	787500	825000	862500	900000	4125000
2.12	Construct 25 water holes (earthen or RCC) at water deficient areas	No.	25	100000	5000000	5250000	5500000	5750000	6000000	27500000
2.13	Maintenacne of waterholes	No.	15	150000	750000	787500	825000	862500	900000	4125000
2.14	Install 10 solar water pump to recharge water holds	No.	10	600000	600000	630000	660000	690000	720000	3300000
2.15	Maintenance and repair of pump	No.	5	10000	10000	10500	11000	11500	12000	55000
2.16	Assess water quality in regular intervals,	Years	5	40000	40000	42000	44000	46000	48000	220000
	<b>Sub Total</b>				<b>23800000</b>	<b>22522500</b>	<b>23925000</b>	<b>25242500</b>	<b>27300000</b>	<b>122790000</b>
<b>3</b>	<b>Species conservation</b>									
3.1	Update Flora and Fauna of BaNP	Times	1	300000				345000		345000
3.2	Restore, maintain and manage degraded forests, vegetation in the, biological corridors (BZ/national forests and CFs outside Pas) by artificial or natural regeneration for safe dispersal of tigers	Years	5	500000	500000	525000	550000	575000	600000	2750000
3.3	Restore, maintain and manage degraded wetlands and water holds in the biological corridors by uprooting and cleaning of weeds to maintain a healthy population of tiger and prey species	Years	5	450000	450000	472500	495000	517500	540000	2475000

S.N.	Activities	Unit	No.	Rate	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total Amount
3.4	Evacuate and restore encroachments in biological corridors within and outside of BZ	Years	5	1500000	1500000	1575000	1650000	1725000	1800000	8250000
3.5	Procure private land of biological corridor to allow free and save movement for wildlife	Bigha	100	90000	1800000	1890000	1980000	2070000	2160000	9900000
3.6	Undertake tiger count in every five years using camera trap	No.	1	300000				345000		345000
3.7	Manage human- tiger conflict and address issues of 'man-eater' tiger immediately when informed	Years	5	250000	250000	262500	275000	287500	300000	1375000
3.8	Prepare land use plans for critical habitats of tigers outside PA's and manage them on the basis of land use plans	Times	1	300000			330000			330000
3.9	Undertake study regarding various aspects of four horned antelope	No.	2	300000		315000		345000		660000
3.10	Prepare four horned antelope conservation action plan;	No.	1	500000	500000					500000
3.11	Disseminate importance of four horned antelope conservation in the community	Years	5	150000	150000	157500	165000	172500	180000	825000
3.12	Carry out spatial distribution and abundance study of four horned antelope;	Times	2	400000	400000				480000	880000
3.13	Provide support to problem animal, injured wildlife and orphan wild animal management practices that including provision of food and treatment	Years	5	50000	50000	52500	55000	57500	60000	275000

S.N.	Activities	Unit	No.	Rate	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total Amount
3.14	Translocation of Blackbuck in BaNP	Times	1	750000				862500		862500
3.15	Release gharial in Rapti river	Times	1	300000					360000	360000
3.16	Introduce mashir fish, tortor in Rapti and Babai river in cooperation with Rampur Campus	Times	3	250000	250000		275000		300000	825000
3.17	Construction of wildlife guiding fence in the canal constructed by Sikta Project	Km	10	600000			2000000	2000000		6000000
3.18	Construction of appropriate stairs or ramps in regular places of Sikta Irrigation Canal	No.	10	30000			100000	100000		300000
3.19	Vaccinate domestic animal in collaboration with Livestock Service Office to reduce communicable diseases	No.	750	250	62500	65625	68750	71875	75000	343750
3.20	Collaborate with Livestock Service Office to replacing unproductive livestock	Times	5	400000	400000	420000	440000	460000	480000	2200000
3.21	Promote stall feeding to reduce grazing pressure	Times	2	300000				345000	360000	705000
3.22	Promote fodder tree plantation in private land	No.	2500	50	25000	26250	27500	28750	30000	137500
3.23	Monitoring of vehicle by operating time card system	Years	5	50000	50000	52500	55000	57500	60000	275000
3.24	Use of radar gun to check speed	Years	5	25000	25000	26250	27500	28750	30000	137500
3.25	Random travelling in the bus to check the speed	Times	120	200	4800	5040	5280	5520	5760	26400

S.N.	Activities	Unit	No.	Rate	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total Amount
3.26	Erect signages of warning to the passersby in the major rights of ways, resource collection sites and shrines	No.	25	5000	250000	26250	27500	28750	30000	137500
3.27	Erect hoarding boards in the highways to reduce animal hit	No.	5	15000	75000					75000
3.28	Update digital database maps using latest topo sheets, satellite imageries and aerial photographs for updating tiger information	Times	1	500000			550000			550000
3.29	Procure 10 bird watching binoculars	No.	10	30000	60000	63000	66000	69000	72000	330000
3.30	Procure 3 digital cameras to take picture of wildlife and birds	No.	10	50000	100000	105000	110000	115000	120000	550000
3.31	Procure 10 GPS	No.	10	30000	60000	63000	66000	69000	72000	330000
	<b>Sub Total</b>				<b>6737300</b>	<b>6102915</b>	<b>9318530</b>	<b>10681645</b>	<b>10214760</b>	<b>43055150</b>
<b>4</b>	<b>Fire management</b>									
4.1	Prepare fire-fighting strategic and management plan and implement it	No.	1	500000				575000		575000
4.2	Clear fire line or undertake control burning in the fire lines before the onset of fire season	Ha.	100	20000	400000	420000	440000	460000	480000	2200000
4.3	Identify fire prone areas by using satellite imagery analysis or web-based fire mapper	Times	1	750000		787500				787500
4.4	Initiate early burning of grasslands on the basis of burning regime and create firebreaks annually	Ha.	100	10000	200000	210000	220000	230000	240000	1100000

S.N.	Activities	Unit	No.	Rate	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total Amount
4.5	Provide firefighting equipment to Park post and BZCFs	Times	2	50000		50000	50000			100000
4.6	Carry out fire prevention education and awareness activities	Times	5	100000	100000	105000	110000	115000	120000	550000
4.7	Establish fire occurrence reporting databases	Times	5	50000	50000	52500	55000	57500	60000	275000
4.8	Establish forest fire early warning systems	No.	2	1000000				1000000	1000000	2000000
	<b>Sub Total</b>				<b>750000</b>	<b>1625000</b>	<b>875000</b>	<b>2437500</b>	<b>1900000</b>	<b>7587500</b>
<b>5</b>	<b>Wildlife health management</b>									
5.1	Establish wildlife orphanage and rescue centre in at least two sectors for emergency treatment	No.	2	1000000				1000000	1000000	2000000
5.2	Carry out regular checkup of elephant at elephant stable and treat them	Times	36	10000	72000	75600	79200	82800	86400	396000
5.3	Treat injured animal upon arrival at orphanage and rescue centre,	Times	5	25000	25000	26250	27500	28750	30000	137500
5.4	Undertake research and development works towards management of wildlife health	Times	5	350000	350000	367500	385000	402500	420000	1925000
5.5	Coordinate Livestock Service Office (LSO) and conservation partners to provide vaccine to livestock against potential diseases that can be transferred to wildlife	Times	5	275000	275000	288750	302500	316250	330000	1512500
5.6	Coordinate with livestock office to undertake postmortem of deceased endangered wild animals	Times	5	50000	50000	52500	55000	57500	60000	275000

S.N.	Activities	Unit	No.	Rate	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total Amount
5.7	Support to establish a community based veterinary center with materials required in medical emergencies,	No.	1	500000				575000		575000
5.8	Build capacity of frontline staff to recognize, record and report disease or poor health condition of animals or plants,	No.	5	250000	250000	262500	275000	287500	300000	1375000
5.9	Report and document mortality of wild animals immediately after it comes to notice of any staff as part of disease surveillance strategy,	No.	5	150000	150000	157500	165000	172500	180000	825000
	<b>Sub Total</b>				<b>1172000</b>	<b>1230600</b>	<b>1289200</b>	<b>2922800</b>	<b>2406400</b>	<b>9021000</b>
6	<b>Encroachment management</b>									
6.1	Mapping of encroached areas and potential hotspots where it can expand	Times	5	325000	325000	341250	357500	373750	390000	1787500
6.2	Issue notice to evacuate the encroached area,	Times	5	125000	125000	131250	137500	143750	150000	687500
6.3	Coordinate with Local Government Authorities to resolve the encroachment problem	Times	5	75000	75000	78750	82500	86250	90000	412500
6.4	Form committee to address the issues of illegal settlers as unregistered land and encroachers,	No.	1	50000	50000					50000
6.5	Relocate the legal and illegal settlers residing in Dang and Salyan if they are willing to move outside of the PA by providing skill based training and other livelihood options	HH	150	30000	900000	945000	990000	1035000	1080000	4950000

S.N.	Activities	Unit	No.	Rate	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total Amount
6.6	Provide compensation for the registered land	HH	250	150000	7500000	7875000	8250000	8625000	9000000	41250000
6.7	Support to improve the livelihood of landless, flood victim people who have encroached the park area for various reasons and evacuate them in win-win situation.	HH	100	30000	600000	630000	660000	690000	720000	3300000
6.8	Demarcate boundary of Park and Settlement area to discourage encroachment;	Times	1	850000	850000					850000
6.9	Fencing, plantation and restoration of evacuated and vulnerable areas	Year	5	1000000	1000000	1050000	1100000	1150000	1200000	5500000
	<b>Sub Total</b>				<b>11425000</b>	<b>11051250</b>	<b>11577500</b>	<b>12103750</b>	<b>12630000</b>	<b>58787500</b>
<b>7</b>	<b>Research, monitoring and capacity building</b>									
7.1	Study of effect of invasive species to wildlife habitat	Times	1	300000				345000		345000
7.2	Collaborate with researchers and academicians to control invasive alien species	Times	2	450000		472500		517500		990000
7.3	Mapping of critical wildlife habitats and areas of high conservation significance	Times	1	500000	500000					500000
7.4	Prepare land use plans for critical habitats of tigers outside PA's and manage them	Times	1	500000				575000		575000
7.5	Undertake study to assess habitat condition of Kamdi corridor	Times	2	300000	300000			345000		645000

S.N.	Activities	Unit	No.	Rate	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total Amount
7.6	Compile all available scientific information on tigers and prey species focusing ecological, methodological and human impacted topics,	Times	5	200000	200000	210000	220000	230000	240000	1100000
7.7	Study of prey base species	Times	3	300000	300000		345000		360000	1005000
7.8	Update digital database maps using latest topo sheets, satellite imageries and aerial photographs for updating tiger information	Times	2	500000		525000			600000	1125000
7.9	Undertake study regarding various aspects of four horned antelope,	Times	3	150000	150000		165000		180000	495000
7.10	Carry out study on spatial distribution and abundance of four horned antelope, hyaena and golden monitor lizard	Times	2	300000		315000		345000		660000
7.11	Undertake intensive research on trans boundary movement of tigers and the use of corridors	Times	2	350000	350000				420000	770000
7.12	Undertake habitat monitoring, check list of food plants, physical and phenological changes in vegetation, quantity and quality of discharges in streams and biotic disturbance,	Times	5	175000	175000	183750	192500	201250	210000	962500
7.13	Conduct study towards effect of habitat fragmentation and degradation on wildlife survival,	Times	2	300000		315000			360000	675000

S.N.	Activities	Unit	No.	Rate	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total Amount
7.14	Study ecological processes that affect in maintaining healthy wildlife population,	Times	2	250000			275000		300000	575000
7.15	Identify indicator species to assess habitat condition,	Times	1	500000	500000					500000
7.16	Conduct study of climate change indicators and impact on biodiversity conservation along with identification of adaptation activities,	Times	2	400000		420000			480000	900000
7.17	Undertake assessment of socio-economic condition of local people in the areas where human-wildlife conflict is high,	Times	2	300000		315000			360000	675000
7.18	Carry out relationship between anthropogenic activities and maintenance of healthy and viable wildlife populations,	Times	1	400000				460000		460000
7.19	Identify fire prone areas by using satellite imagery analysis or using the web-based fire mapper	Times	1	350000			385000			385000
7.20	Conduct study to assess the optimum quantity of sand, gravel and boulder that can be extracted each year	Times	2	500000	500000				600000	1100000
7.21	Study of status and condition of Gharial and Mugger in rapti river	Times	1	300000	300000					300000
7.22	Study to improve the management of cremation site (ghat) to reduce waste at both sides of highway	Times	2	150000				172500	180000	352500

S.N.	Activities	Unit	No.	Rate	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total Amount
7.23	Study the impacts of changes in precipitation and temperatures in the biodiversity of the Park	Times	2	250000	250000				300000	550000
7.24	Study and document indigenous wetland conservation knowledge, skills and practices	Times	2	300000		315000		345000		660000
	<b>Sub Total</b>				<b>3525000</b>	<b>3071250</b>	<b>1582500</b>	<b>3536250</b>	<b>4590000</b>	<b>16305000</b>
	<b>Monitoring</b>									
7.25	Conduct regular monitoring of water quality of different wetlands	Times	5	75000	75000	78750	82500	86250	90000	412500
7.26	Monitoring of indicator species to assess habitat condition	Times	5	225000	225000	236250	247500	258750	270000	1237500
7.27	Monitor tigers around the human activity areas with local community engagement	Times	2	200000	200000				240000	440000
7.28	Monitoring of tiger on periodic basis based on camera trap,	Times	5	300000	300000	315000	330000	345000	360000	1650000
7.29	Monitoring of four horned antelope on periodic basis based on direct count	Times	5	100000	100000	105000	110000	115000	120000	550000
7.30	Monitoring of prey base species	Times	5	200000	200000	210000	220000	230000	240000	1100000
7.31	Monitoring of small mammals	Times	5	200000	200000	210000	220000	230000	240000	1100000
7.32	Undertake Bird Survey on periodic basis	Times	5	300000	300000	315000	330000	345000	360000	1650000
7.33	Monitor habitat quality using DNPWC-MIS formats for ground verification, data validation and management implications,	Times	5	250000	250000	262500	275000	287500	300000	1375000

S.N.	Activities	Unit	No.	Rate	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total Amount
	<b>Training</b>									
	<b>Sub Total</b>				<b>1850000</b>	<b>1732500</b>	<b>1815000</b>	<b>1897500</b>	<b>2220000</b>	<b>9515000</b>
7.34	Orientation training to security units	Times	5	25000	25000	26250	27500	28750	30000	137500
7.35	Orientation training to Game Scouts on legal issues	Times	3	150000	150000		165000		180000	495000
7.36	Wildlife management and handling training	Times	2	200000	200000			200000		400000
7.37	Basic training Games Scouts and Rangers to handle GPS	Times	3	250000	250000		275000		300000	825000
7.38	Training on Real-time SMART patrolling	Times	2	250000		262500	575000			837500
7.39	Field techniques, including signs and indirect evidences of wildlife	Times	5	300000	300000	315000	330000	345000	360000	1650000
7.40	Train staff to collect sample of blood, fecal matter, urine or vital organs	Times	5	100000	100000	105000	110000	115000	120000	550000
7.41	Basic training on vegetation quantification for recording data in monitoring plots	Times	2	250000		262500		287500		550000
7.42	Training on wildlife health condition assessment	Times	5	300000	300000	315000	300000	345000	360000	1620000
7.43	Provide trainings to nature guides to enhance their capacity in nature interpretation specifically on wildlife, birds, plants	Times	3	250000	250000			287500	300000	837500
7.44	Training to park staff in wildlife habitat monitoring	Times	3	200000		210000		230000	240000	680000

S.N.	Activities	Unit	No.	Rate	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total Amount
7.45	Forest Fire Management Training to park staff and security personnel and BZCFUG members	Times	3	200000		210000		230000	240000	680000
7.46	Anti-poaching operation and control training	Times	2	300000		315000		600000		915000
7.47	Training for community based anti-poaching units	Times	3	400000		420000	440000	460000		1320000
7.48	Crime scene investigation and interrogation training	Times	3	250000	250000		250000		300000	800000
7.49	Conduct trainings to enhance the capacity of Park Staffs, security persons, and BZ communities to cope with the climate change impacts	Times	2	350000	350000				420000	770000
7.50	Training on nature interpretation and display management	Times	2	200000				230000	240000	470000
7.51	Human rights training to handle the convicted people	Times	5	250000	250000	262500	250000	287500	300000	1350000
7.52	Training on social mobilization	Times	2	500000		525000		575000		1100000
7.53	Training of Trainers (general and specialized)	Times	2	500000		525000		575000		1100000
7.54	Training on appreciative enquiry	Times	3	150000	150000		150000		180000	480000
7.55	Public administration and management training	Times	2	400000				460000	480000	940000
7.56	Training on organization development and management	Times	2	500000	500000				600000	1100000
7.57	Planning, monitoring and evaluation training	Times	5	200000	200000	210000	200000	230000	240000	1080000

S.N.	Activities	Unit	No.	Rate	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total Amount
7.58	Training on conflict management	Times	3	200000	200000		220000		240000	660000
7.59	CITES training	Times	2	50000	50000		55000			105000
7.60	Database management Training to Rangers and Officers	Times	5	50000	50000	52500	55000	57500	60000	275000
7.61	GIS training to Rangers and Officers	Times	3	300000		315000		345000	360000	1020000
7.62	Judicial training to park officers									
7.63	Certificate course in wildlife management									
7.64	Diploma course in wildlife management									
	<b>Sub Total</b>				<b>3575000</b>	<b>4331250</b>	<b>3402500</b>	<b>5888750</b>	<b>5550000</b>	<b>22747500</b>
	<b>Institutional strengthening</b>									
7.65	Celebration of conservation days	Times	20	150000	150000	157500	165000	187500	217500	877500
7.66	Organize World Wildlife Week	Times	5	100000	100000	105000	110000	115000	120000	550000
7.67	Review and upgrade reporting and information sharing system	No.	5	300000	300000	315000	330000	345000	360000	1650000
7.68	Annual progress report publication	years	5	125000	125000	131250	137500	143750	150000	687500
7.69	Website hosting	Times	5	25000	25000	26250	27500	28750	30000	137500
7.70	Evaluation of five year management plan	Times	1	1500000					1500000	1500000
7.71	Prepare next five-year management plan including IEE	Times	1	1500000					1500000	1500000
7.72	Undertake evaluation of five-year management plan	Times	1	500000					600000	600000
7.73	Conduct management effectiveness of the Park and BZ	Times	1	650000					780000	780000

S.N.	Activities	Unit	No.	Rate	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total Amount
7.74	Organize/participate in trans boundary meeting	Times	5	75000	75000	78750	82500	86250	90000	412500
7.75	Strengthen District Level Wildlife Crime Control Bureau (trimester meeting)	years	5	75000	75000	78750	82500	86250	90000	412500
7.76	Coordination meeting with Stakeholders	Times	5	150000	150000	157500	165000	172500	180000	825000
7.77	Trimester level staff meeting	Times	15	150000	150000	157500	165000	172500	180000	825000
<b>8</b>	<b>Sub Total</b>				<b>1150000</b>	<b>1207500</b>	<b>1265000</b>	<b>1337500</b>	<b>5797500</b>	<b>10757500</b>
8.1	Tourism Construct seven entry gate for visitors in Shiva khola, Kusum, Sikta, Dhakeri, Chisapani, Sutaiya and Khadgabar	No.	7	1000000	1400000	1470000	1540000	1610000	1680000	7700000
8.2	Construct multipurpose VIC at Kohalpur and Obhari that includes ticket counter, display centre, museum, documentary showing hall, souvenir shop, refreshment centre, and rest room	No.	3	3000000	3000000	3150000	3300000			9450000
8.3	Construction of watch towers (concrete)	No.	5	1000000	1000000	1050000	1100000	1150000	1200000	5500000
8.4	Construct, maintain and repair concrete or wooden watch towers at appropriate locations near grasslands and waterholes	No.	9	150000	260000	273000	286000	299000	312000	1430000
8.5	Construction of fire line (Khairee khola-Shiva khola, Thoria-Kyureni, Khangbar-Jhadikhare)	Km	56	200000	2240000	2352000	2464000	2576000	2688000	12320000

S.N.	Activities	Unit	No.	Rate	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total Amount
8.6	Develop comprehensive tourism plan of BaNP	No.	1	500000	500000					500000
8.7	Construct cultural house and museums in the BZ	No.	1	750000					900000	900000
8.8	Undertake study of elephant safari route and provide elephant safari service to the visitors	Times	1	500000	100000	105000	110000	115000	120000	550000
8.9	Construct raised platforms to climb for elephant safari, at least, in two places	No.	3	250000	750000					750000
8.10	Undertake study to finalize jeep safari routes and provide route permit and license to operate jeep safari	Times	1	400000		420000				420000
8.11	Place advertisement boards of elephant and jeep safari in the Park	No.	5	25000	125000					125000
8.12	Organize meetings and training to promote local entrepreneur and nature guide to operate jeep safari and other facilities in the Park	Years	5	100000	100000	105000	110000	115000	120000	550000
8.13	Provide license to initiate jeep safari for visitors	Times	2	150000	150000		165000			315000
8.14	Prepare a sanitation guideline for hotel, lodge and homestay operators	No.	1	300000	100000					100000
8.15	Organize Clean-up campaigns to manage waste along the highway (waste collection and disposal)	Times	15	50000	150000	157500	165000	172500	180000	825000

S.N.	Activities	Unit	No.	Rate	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total Amount
8.16	Conduct nature guide trainings to local and interested individuals giving priority to indigenous and marginalized communities and youths	Times	3	250000	250000		275000		300000	825000
8.17	Enhance capacity of nature guides in nature interpretation specifically on wildlife, birds, plants through trainings and some experience sharing activities	Times	2	250000		262500		287500		550000
8.18	Conduct home-stay, house-keeping and cook trainings at Agaiya, Dhakeri, Khadgabar, Gavar valley, Balapur and Buchapur	Times	3	250000	250000	262500	275000			787500
8.19	Conduct cook training	Times	3	400000	400000	420000	440000	460000		1720000
8.20	Place signage at appropriate location in the Park to show direction to the visitors	No.	25	20000	100000	105000	110000	115000	120000	550000
8.21	Organize meetings and training to promote local entrepreneur to operate community lodges and homestays in the tourist hubs of the BZ especially in Gavar valley, Balapur and Buchapur	No.	3	225000	225000	236250	247500			708750
8.22	Organize cottage and small business development and management training	Times	3	300000			330000	345000	360000	1035000
8.23	Organize Clean-up campaigns to manage waste along the highway (waste collection and disposal)	Years	5	175000	175000	183750	192500	201250	210000	962500

S.N.	Activities	Unit	No.	Rate	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total Amount
8.24	Place display boards in the VICs of BNP and KrCA to attract visitors in BaNP	No.	2	150000		315000				315000
8.25	Place display boards with information on tourist destination areas and tourism products of BaNP in Bhairahawa and Nepalgunj Airport;	No.	2	150001		315002				315002
8.26	Erect hoarding boards informing Do's and Don'ts in the Park and BZ for the visitors	No.	5	25000			27500			27500
8.27	Prepare Video Spot to promote tourism in BaNP	No.	1	150000		157500				157500
8.28	Advertise tourism products in the Park through Television, Radio and FM radio at national and local level	years	5	180000	180000	189000	198000	207000	216000	990000
8.29	Provide support to journalists to visit BaNP and publish article	Times	5	75000	75000	78750	82500	86250	90000	412500
8.30	Publish news and article in newspaper	Times	5	100000	100000	105000	110000	115000		430000
8.31	Production of video documentary	Times	1	400000					480000	480000
	<b>Sub Total</b>				<b>11630000</b>	<b>11712752</b>	<b>11528000</b>	<b>7854500</b>	<b>8976000</b>	<b>51701252</b>
9	<b>Climate change and Solid waste management</b>									
	<b>Climate change adaptation</b>									
9.1	Conduct participatory vulnerability assessments to identify the most vulnerable regions and communities	Times	5	150000	150000	157500	165000	172500	180000	825000

S.N.	Activities	Unit	No.	Rate	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total Amount
9.2	Prepare Local Adaptation Plan of Action for all the municipalities and rural municipalities of BZ while prioritizing Rapti Sonari and Babai to start with	No.	10	300000	300000	315000	330000	345000	360000	1650000
9.3	Form community-based disaster management committee and link them with climate change and adaptation related institutions to tackle climate-related effects	No.	1	100000	100000					100000
9.4	Pilot early warning system of flash flood in the flood prone areas	No.	2	750000		787500		862500		1650000
9.5	Prepare forest fire management plan and integrate forest fire control in the OP of BZCF	No.	1	500000			550000			550000
9.6	Implement community-based forest fire management	Times	5	500000	500000	525000	550000	575000	600000	2750000
9.7	Construct embankment, spur or any soil conservation measure in various rivers and streams to protect park infrastructures, human settlements and wildlife habitats from flood specially around Park head quarter, Paruwa Khola, Rapti River, Duduwa Khola, Babai river banks, Bhakta khola, Jhijari, Jethinala and Gaukholi;	Times	5	1500000	1500000	1575000	1650000	1725000	1800000	8250000
9.8	Conserve churia region to control sediment flow in the downstream	Times	5	500000	500000	525000	550000	575000	600000	2750000

S.N.	Activities	Unit	No.	Rate	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total Amount
9.9	Carry out plantation of soil binder species along river banks to control land slide	Times	5	150000	150000	157500	165000	172500	180000	825000
9.10	Facilitate market linkages and voluntary carbon financing.	Times	1	400000				460000		460000
	<b>Solid waste management</b>									0
9.11	Prepare a common sanitation guideline to make them adopt minimum sanitation standards for hotel, lodge, homestay and restaurant in managing clean front yard, toilet with leak proof septic tanks and waste water soakage pits	Times	1	300000		315000				315000
9.12	Provide support to manage garbage with special focus on reducing production, recycling, and destruction by prohibiting the use of polluting items such as plastic bags	Times	2	400000		420000		460000		880000
9.13	Support to develop proper sanitation infrastructures including drainage, toilets, collection and recycling systems	Times	5	500000	500000	525000	577500	664125	796950	3063575
9.14	Construct a community based museum and information center on garbage management in order to demonstrate proper techniques of garbage disposal and recycling techniques to stakeholders	Times	2	250000		262500		287500		550000
9.15	Construct new cremation site.	Times	1	750000			825000			825000
	<b>Sub Total</b>				<b>3700000</b>	<b>5565000</b>	<b>5362500</b>	<b>6299125</b>	<b>4516950</b>	<b>25443575</b>

S.N.	Activities	Unit	No.	Rate	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total Amount
10	<b>Buffer Zone</b>									
10.1	Provide support to form BZCFs	No.	10	150000	1500000	1575000	1650000	1725000	1800000	8250000
10.2	Provide support to BZCF to prepare constitution, operational plan and its renewal	No.	150	2500	1250000	131250	137500	143750	150000	687500
10.3	Support in institutional strengthening of BZUGs, BZUCs, BZCFs	Year	5	400000	400000	420000	441000	463050	486203	2210253
10.4	Organize BZCF management trainings	No.	3	75000	75000	78750	82500			236250
10.5	Provide Leadership training to BZ institutions	No.	5	500000	500000	525000	551250	578813	607753	2762816
10.6	Provide Account keeping training to BZ institutions	No.	5	500000	500000	525000	551250	578813	607753	2762816
10.7	Support BZUC to prepare five year plan	Times	1	500000	500000	525000	551250	578813	607753	2762816
10.8	Provide support to install Improved Cook Stove (ICS) and biogas	No.	2500	1000	50000	52500	55000	57500	60000	275000
10.9	Provide support to install biogas	No.	250	15000	750000	787500	825000	862500	900000	4125000
10.10	Create alternative grazing land and ponds in appropriate areas of BZ for livestock to reduce pressure on core area	Year	5	1500000	1500000	1575000	1650000	1725000	1800000	8250000
10.11	Construct fire lines in BZ forests	Year	5	2000000	2000000	2100000	2200000	2300000	2400000	11000000
10.12	Upgrade the fire line from Paruwa khola to Balapur village	No.	1	750000				862500		862500

S.N.	Activities	Unit	No.	Rate	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total Amount
10.13	Support to operate 3 private nurseries in 3 districts	Years	5	150000	150000	157500	165000	172500	180000	825000
10.14	Restore degraded forests in the BZ/ national forests and CFs in BZ by artificial or natural regeneration	Ha.	50	25000	250000	262500	275000	287500	300000	1375000
10.15	Create alternative grazing land and ponds in appropriate areas of BZ for livestock to reduce pressure on core area;	Years	5	1000000	1000000	1050000	1100000	1150000	1200000	5500000
10.16	Provide seedlings and organize plantation in the corridor, public lands to enhance greenery in degraded corridors	Years	5	600000	600000	630000	660000	690000	720000	3300000
10.17	Pilot rain water harvesting program in selected Churia region	Times	5	500000	500000	525000	550000	575000	600000	2750000
10.18	Initiate Churia conservation program	No.	5	300000	300000	315000	330000	345000	360000	1650000
10.19	Monitor the extraction of soil, sand and gravel in coordination with local authority.	Years	5	250000	250000	262500	275000	287500	300000	1375000
10.20	Construction of culvert and cause way	No.	15	500000	1500000	1575000	1650000	1725000	1800000	8250000
10.21	Support to repair and maintenance of Tuber Culosis rehabilitation centre at Agaiya	Times	1	150000	150000					150000
10.22	Construct drinking water facilities at Rapti sonari -1, Bajkholi and Bajjanath-1, Chisapani	No.	1	1000000			1100000			1100000

S.N.	Activities	Unit	No.	Rate	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total Amount
10.23	Prepare livelihood improvement plan	No.	1	500000	500000					500000
10.24	Introduce improved animal breed to reduce number of unproductive animal	No.	20	25000	100000	105000	110000	115000	120000	550000
10.25	Promote crops that are not preferred by wildlife	Times	2	300000		330000		45000		375000
10.26	Promote high value crops and crops that are not preferred by wildlife	Times	2	75000	300000		330000			630000
10.27	Manage relief fund efficiently for the victims of human wildlife conflict	Year	5	2500000	2500000	2625000	2750000	2875000	3000000	13750000
10.28	Provide livestock, poultry and off-season vegetable farming trainings	Times	3	225000	225000		247500		270000	742500
10.29	Provide support to skill based occupational trainings to local people of BZ	Times	2	300000		315000		345000		660000
10.30	Organize orientation related to conservation legislation in order to maintain Park-people amity;	Times	3	25000	25000		27500		30000	82500
10.31	Initiate conservation focused programme in schools of BZ by forming Eco-clubs	Years	5	400000	400000	420000	440000	460000	480000	2200000
10.32	Strengthen Eco-clubs by providing trainings such as team building, management of club as organization and organizing events	Years	5	625000	625000	656250	687500	718750	750000	3437500
10.33	Mobilize Eco-clubs to organize plantation, clean up campaigns and conservation rallies	Years	5	150000	150000	157500	165000	172500	180000	825000

S.N.	Activities	Unit	No.	Rate	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total Amount
10.34	Provide support to organize conservation related school level contest such as oratory, quiz, essay, poem and songs to enhance their knowledge in conservation	Years	5	250000	250000	262500	275000	287500	300000	1375000
10.35	Provide support to organize conservation related school level contest such as oratory, quiz, essay, poem and songs to enhance their knowledge in conservation	Years	5	500000	500000	525000	550000	575000	600000	2750000
10.36	Organize learning visits in other PAs to BaNP staffs and BZUC members to see the success stories and interact with other community members	Times	2	500000		525000		575000		1100000
10.37	Organize conservation education tours to Eco-club members to increase their awareness in biodiversity conservation	Times	3	300000	315000		330000		360000	1005000
10.38	Organize conservation education tours to Eco-club members to increase their awareness in biodiversity conservation;	Times	5	200000	200000	210000	220000	230000	240000	1100000
10.39	Organize learning visits in other PAs to BaNP staffs and BZUC members to see the success stories and interact with other community members;	Times	5	450000	450000	472500	495000	517500	540000	2475000
10.40	Produce Information Education and Communication (IEC) material;	Times	2	500000	500000				600000	1100000

S.N.	Activities	Unit	No.	Rate	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total Amount
10.41	Support Community Based Anti-poaching Unit ( Chisapani, Kohalpur, Bharaiya, Dhakeri, Mahadeva- Shamshergunj, Sikta, Kusum, Rajkot, Nauwasta, Ghuiwabari)	Years	5	100000	100000	105000	110000	115000	120000	550000
10.42	Strengthen and institutionalize CBAPU's	Times	3	200000	200000		220000		240000	660000
10.43	Develop a network of CBAPU	Times	2	300000			330000		360000	690000
10.44	Produce Information Education and Communication (IEC) material	Times	1	300000			300000			300000
10.45	Celebrate special Days	Years	5	300000	300000	315000	330000	345000	360000	1650000
10.46	BZUCs activities				34477529	44140905.5	39694531.9	42997583.4	37511434.8	198821985
	<b>Sub Total</b>				<b>69117529</b>	<b>79357155</b>	<b>78251782</b>	<b>82042071</b>	<b>78220897</b>	<b>386989434</b>
11	<b>Administrative</b>									
11.1	Salary+Travel Allowance+Uniform+Ration				51864000	54457200	57050400	59643600	62236800	285252000
11.2	Procure computer	No.	5	80000	80000	84000	88000	92000	96000	440000
11.3	Procure multimedia projector	No.	1	90000		94500				94500
11.4	Management of office equipment	Years	5	50000	50000	52500	55000	57500	60000	275000
11.5	Stationeries	Years	5	50000	50000	52500	55000	57500	60000	275000
11.6	Procure furniture	Years	5	100000	100000	105000	110000	115000	120000	550000
11.7	Payment of electricity, telephone, Internet	Years	5	50000	50000	52500	55000	57500	60000	275000
	<b>Sub Total</b>				<b>52194000</b>	<b>54898200</b>	<b>57413400</b>	<b>60023100</b>	<b>62632800</b>	<b>287161500</b>
	<b>Total</b>				<b>232090829</b>	<b>248240623</b>	<b>240358912</b>	<b>259385241</b>	<b>252318307</b>	<b>1232393911</b>

## Annex-VII

### Five Year Plan of BZ with Activities and Budget

#### Annex VII-1

#### Summary budget of BZUCs

S.N.	Activities	Year I	Year II	Year III	Year IV	Year V	Total
<b>1</b>	<b>Kohalpur BZUC</b>						
	Conservation Program	2316002	2431802	2547602	2663402	2499202	12458011
	Community Development	450000	525000	1045000	1897500	1920000	5837500
	Income generation & Skill Development	350000	357500	420000	602500	320000	2050000
	Conservation Education	140000	462000	484000	506000	168000	1760000
	Administrative Cost	202000	212100	222200	232300	342400	1211000
	<b>Sub Total</b>	<b>3458002</b>	<b>3988402</b>	<b>4718802</b>	<b>5901702</b>	<b>5249602</b>	<b>23316511</b>
<b>2</b>	<b>Purandhara BZUC</b>						
	Conservation Program	1553000	1630650	1708300	1768700	1455600	8116250
	Community Development	1960000	2796000	959500	1978000	1344000	9037500
	Income generation & Skill Development	245000	416250	310000	423500	252000	1646750
	Conservation Education	330000	436500	143000	494500	180000	1584000
	Administrative Cost	72000	125600	79200	82800	186400	546000
	<b>Sub Total</b>	<b>4160000</b>	<b>5405000</b>	<b>3200000</b>	<b>4747500</b>	<b>3418000</b>	<b>20930500</b>
<b>3</b>	<b>Phurke Salli BZUC</b>						
	Conservation Program	2025000	1905750	841500	845250	882000	6499500
	Community Development	1020000	1470000	1017500	1437500	540000	5485000
	Income generation & Skill Development	150000	157500	165000	172500	189000	834000
	Conservation Education	330000	436500	143000	494500	156000	1560000

S.N.	Activities	Year I	Year II	Year III	Year IV	Year V	Total
	Administrative Cost	175000	233750	192500	201250	310000	1112500
	<b>Sub Total</b>	<b>3700000</b>	<b>4203500</b>	<b>2359500</b>	<b>3151000</b>	<b>2077000</b>	<b>15491000</b>
4	<b>Hattidamar Ghuiyabari BZUC</b>						
	Conservation Program	1424000	1495200	1566400	2097600	2188800	8772000
	Community Development	1550000	2152500	1595000	977500	1080000	7355000
	Income generation & Skill Development	190800	315840	198880	207920	216960	1130400
	Conservation Education	95000	435750	126500	477250	138000	1272500
	Administrative Cost	190000	252000	209000	218500	348000	1217500
	<b>Sub Total</b>	<b>3449800</b>	<b>4651290</b>	<b>3695780</b>	<b>3978770</b>	<b>3971760</b>	<b>19747400</b>
5	<b>Rajkot BZUC</b>						
	Conservation Program	1562000	1640100	1905200	2440300	2090400	9638000
	Community Development	2060000	2058000	1386000	1449000	1512000	8465000
	Income generation & Skill Development	497200	522060	546920	571780	596640	2734600
	Conservation Education	230000	556500	253000	609500	252000	1901000
	Administrative Cost	258000	218400	228800	234600	344800	1284600
	<b>Sub Total</b>	<b>4607200</b>	<b>4995060</b>	<b>4319920</b>	<b>5305180</b>	<b>4795840</b>	<b>24023200</b>
6	<b>Rapti BZUC</b>						
	Conservation Program	2080000	1974000	2618000	2737000	2856000	12265000
	Community Development	760000	1522500	1705000	845250	1242000	6074750
	Income generation & Skill Development	457500	480375	484000	506000	528000	2455875
	Conservation Education	165000	488250	181500	534750	198000	1567500
	Administrative Cost	267000	227850	238700	221950	331600	1287100
	<b>Sub Total</b>	<b>3729500</b>	<b>4692975</b>	<b>5227200</b>	<b>4844950</b>	<b>5155600</b>	<b>23650225</b>
7	<b>Deurali Hariyali BZUC</b>						
	Conservation Program	1584000	1663200	1742400	2109100	2200800	9299500
	Community Development	520000	1333500	1397000	598000	624000	4472500
	Income generation & Skill Development	600000	630000	1485000	1840000	1020000	5575000

S.N.	Activities	Year I	Year II	Year III	Year IV	Year V	Total
	Conservation Education	220000	546000	242000	598000	264000	1870000
	Administrative Cost	211000	221550	232100	242650	353200	1260500
	<b>Sub Total</b>	<b>3135000</b>	<b>4394250</b>	<b>5098500</b>	<b>5387750</b>	<b>4462000</b>	<b>22477500</b>
8	<b>Dhakeri BZUC</b>						
	Conservation Program	2100000	2205000	2970000	2990000	2280000	12545000
	Community Development	500000	1312500	1595000	690000	960000	5057500
	Income generation & Skill Development	555000	582750	676500	523250	546000	2883500
	Conservation Education	364027	697228.4	345429.7	706131.1	376832.4	2489648.5
	Administrative Cost	211000	221550	232100	242650	353200	1260500
	<b>Sub Total</b>	<b>3730027</b>	<b>5019028</b>	<b>5819030</b>	<b>5152031</b>	<b>4516032</b>	<b>24236149</b>
9	<b>Madhyabindu BZUC</b>						
	Conservation Program	2033000	2439150	2049300	2441450	1947600	10910500
	Community Development	1000000	2625000	2112000	770500	804000	7311500
	Income generation & Skill Development	950000	997500	495000	517500	540000	3500000
	Conservation Education	184000	508200	367400	556600	220800	1837000
	Administrative Cost	341000	221550	232100	242650	353200	1390500
	<b>Sub Total</b>	<b>4508000</b>	<b>6791400</b>	<b>5255800</b>	<b>4528700</b>	<b>3865600</b>	<b>24949500</b>
	<b>Total</b>	<b>34477529</b>	<b>44140905</b>	<b>39694532</b>	<b>42997583</b>	<b>37511435</b>	<b>198821985</b>

## Five Year Plan of BZUCs

### Annex VII-2

#### Deurali Hariyali BZUC

S.N.	Activities	Unit	Quantity	Rate	Amount	Year I	Year II	Year III	Year IV	Year V	Total amount	Remarks
<b>A</b>	<b>Conservation Program</b>											
1	Fencing including wiregauge	Km	15	300000	4500000	900000	945000	990000	1380000	1440000	5655000	
2	Bio gas construction donation	No.	100	10000	1000000	200000	210000	220000	230000	240000	1100000	
3	BZCF operational plan renewal	Household	5	50000	250000	50000	52500	55000	57500	60000	275000	
4	Group, committee's legislation operational plan formation	No.	12	10000	120000	24000	25200	26400	27600	28800	132000	
5	Forest guard motivation (uniform, raincoat, recharge, torchlight purchase)	No.	5	100000	500000	100000	105000	110000	115000	120000	550000	
6	Fireline construction, repair, cleaning	Ha	35	10000	350000	70000	73500	77000	80500	84000	385000	
7	Pond construction	No. of People	7	50000	350000	70000	73500	77000	80500	84000	385000	
8	Theft control program	Times	15	20000	300000	60000	63000	66000	69000	72000	330000	
9	Youth involvement for anti-theft program	Cubic meter	5	60000	300000	60000	63000	66000	69000	72000	330000	
10	Grassland management	Place	15	10000	150000	50000	52500	55000			157500	
											<b>9299500</b>	

S.N.	Activities	Unit	Quantity	Rate	Amount	Year I	Year II	Year III	Year IV	Year V	Total amount	Remarks
<b>B</b>	<b>Community Development</b>											
1	User committee's building construction	No.	1	150000	150000		787500	825000	0	0	1612500	
2	Road construction	Group	10	100000	1000000	200000	210000	220000	230000	240000	1100000	
3	Gravel road repair	Km	15	20000	300000	60000	63000	66000	69000	72000	330000	
4	Bridge repair	No.	10	20000	200000	40000	42000	44000	46000	48000	220000	
5	Bridge construction	Meter	10	50000	500000	100000	105000	110000	115000	120000	550000	
6	Drinking water tap construction support	No.	30	20000	600000	120000	126000	132000	138000	144000	660000	
											<b>4472500</b>	
<b>C</b>	<b>Income generation and skill development</b>											
1	Homestay development	No.	3	500000	1500000			825000	862500		1687500	
2	Basket, chair making training	No.	5	150000	750000	150000	157500	165000	172500	180000	825000	
3	Plumbing, electrician training	Kg	5	150000	750000	150000	157500	165000	172500	180000	825000	
4	Improved farm construction (including safety from wildlife)	No.	100	15000	1500000	300000	315000	330000	345000	360000	1650000	
5	Herb farming initiation	No.	5	100000	500000				287500	300000	587500	
											<b>5575000</b>	
<b>D</b>	<b>Conservation education</b>											
1	Public informatin program (wildlife to human and from human to wildlife)	Times	5	50000	250000	50000	52500	55000	57500	60000	275000	

S.N.	Activities	Unit	Quantity	Rate	Amount	Year I	Year II	Year III	Year IV	Year V	Total amount	Remarks
2	Group, committee's educational tour	Times	2	300000	600000		315000		345000	0	660000	
3	Celebration day program	Times	5	20000	100000	20000	21000	22000	23000	24000	110000	
4	Human wildlife conflict reduction program	Times	5	50000	250000	50000	52500	55000	57500	60000	275000	
5	Support for eco club	Times	5	100000	500000	100000	105000	110000	115000	120000	550000	
											<b>1870000</b>	
<b>E</b>	<b>Administrative Costs</b>											
1	Stationery	Years	5	24000	120000	24000	25200	26400	27600	28800	132000	
2	Tiffin on meeting	Years	5	18000	90000	18000	18900	19800	20700	21600	99000	
3	Office assistant wage	Years	5	130000	650000	130000	136500	143000	149500	156000	715000	
4	Account monitoring	Years	5	15000	75000	15000	15750	16500	17250	18000	82500	
5	Conservation related expenses	Years	5	12000	60000	12000	12600	13200	13800	14400	66000	
6	Communication expenses	Years	5	12000	60000	12000	12600	13200	13800	14400	66000	
7	Group/committee reformation	Times	1	50000	50000					50000	50000	
8	5 years operational plan formation	Times	1	50000	50000					50000	50000	
											<b>1260500</b>	
	<b>Total</b>										<b>22477500</b>	

**Annex VII-3**  
**Dhakeri BZUC**

S.N.	Activities	Unit	Quantity	Rate	Amount	Year I	Year II	Year III	Year IV	Year V	Total amount	Remarks
<b>A</b>	<b>Conservation Program</b>											
1	Fencing including wiregauge construction	Km	10	400000	4000000	1200000	1260000	1320000	1380000	1440000	6600000	
2	Shrubs plantation	Ha	10	30000	300000	60000	63000	66000	69000	72000	330000	
3	Fireline repair	Household	30	5000	150000	30000	31500	33000	34500	36000	165000	
4	Pond construction on CF	No.	5	200000	1000000	200000	210000	220000	230000	240000	1100000	
5	View tower construction	No.	2	500000	1000000			550000	575000		1125000	
6	Crocodile monitoring program in rapiti river	Ha	1	100000	100000	100000					100000	
7	Grassland management	No. of People	30	15000	450000	90000	94500	99000	103500	108000	495000	
8	Forest guard equipment (uniform, raincoat, recharge, torchlight purchase)	Years	5	45000	225000	45000	47250	49500	51750	54000	247500	
9	Bio gas donation	Cubic meter	100	10000	1000000	200000	210000	220000	230000	240000	1100000	
10	Pond construction on CF	Place	2	100000	200000	100000		110000			210000	
11	Electric fencing	Km	3	200000	600000		210000	220000	230000		660000	
12	Youth involvement for anti-theft	Years	5	75000	375000	75000	78750	82500	86250	90000	412500	
											<b>12545000</b>	
<b>B</b>	<b>Community Development</b>	Group										
1	User committee's building construction	No.	1	1500000	1500000		787500	825000	0	0	1612500	

S.N.	Activities	Unit	Quantity	Rate	Amount	Year I	Year II	Year III	Year IV	Year V	Total amount	Remarks
2	Road gravelling	Km	2	20000	40000			220000	230000	0	450000	
3	Gravel road repair	Meter	10	50000	500000	100000	105000	110000	115000	120000	550000	
4	Hyum pipe purchase and installation	No.	30	25000	750000	150000	157500	165000	172500	180000	825000	
5	Culvert construction	No.	1	400000	400000					480000	480000	
6	Source and canal repair	Km	3	100000	300000	100000	105000	110000			315000	
7	Aadibasi, janajati cultural museum construction	No.	1	1500000	1500000	150000	157500	165000	172500	180000	825000	
											<b>5057500</b>	
<b>C</b>	<b>Income generation and skill development</b>	<b>Kg</b>										
1	Homestay initiation support	Times	3	100000	300000	100000	105000	110000			315000	
2	Furniture, Labourer, cook, waiter, mobiel and computer repair, motorcycle repair, house wiring, driving, plumbing training	No. of People	75	7000	525000	105000	110250	115500	120750	126000	577500	
3	Herb seed's donation	No. of People	50	5000	250000	50000	52500	55000	57500	60000	275000	
4	Farm improvement donation support	No.	150	10000	1500000	300000	315000	330000	345000	360000	1650000	
5	Chicken farming training	Times	30	2000	60000			66000			66000	
											<b>2883500</b>	
<b>D</b>	<b>Conservation education</b>											

S.N.	Activities	Unit	Quantity	Rate	Amount	Year I	Year II	Year III	Year IV	Year V	Total amount	Remarks
1	Group/committee educational tour	Times	2	300000	600000		315000		345000		660000	
2	Account and leadership development training	Times	2	50000	100000	50000	52500				102500	
3	School program (drawing, essay, eloquition, quiz, road play, eco club initiation)	Times	10	20000	200000	40000	42000	44000	46000	48000	220000	
4	Celebration day program	Times	10	15000	150000	30000	31500	33000	34500	36000	165000	
5	Hoading board construction	No.	11	20000	220000	44000	46200	48400	50600	52800	242000	
6	Program broadcasting on tv and radio		100	10000	1000000	200027	210028.35	220029.7	230031.05	240032.4	1100148.5	
		Years									<b>2489648.5</b>	
<b>E</b>	<b>Administrative Costs</b>	Years										
1	Stationery	Years	5	24000	120000	24000	25200	26400	27600	28800	132000	
2	Tiffin on meeting	Years	5	18000	90000	18000	18900	19800	20700	21600	99000	
3	Office assistant wage	Years	5	130000	650000	130000	136500	143000	149500	156000	715000	
4	Account monitoring	Years	5	15000	75000	15000	15750	16500	17250	18000	82500	
5	Conservation related expenses	Years	5	12000	60000	12000	12600	13200	13800	14400	66000	
6	Communication	Years	5	12000	60000	12000	12600	13200	13800	14400	66000	
7	Group/committee reformation program	Times	1	50000	50000					50000	50000	
8	5 years operational plan formation	Times	1	50000	50000					50000	50000	
	<b>Total</b>										<b>1260500</b>	
											<b>24236148.5</b>	

**Annex VII-4**  
**Hattidamar Ghueiyabari BZUC**

S.N.	Activities	Unit	Quantity	Rate	Amount	Year I	Year II	Year III	Year IV	Year V	Total amount	Remarks
<b>A</b>	<b>Conservation Program</b>											
1	Wire gauge construction	Km	7	40000	280000	40000	42000	44000	92000	96000	314000	
2	Community forest renewal	No.	5	50000	250000	50000	52500	55000	57500	60000	275000	
3	Gorest guard wages for 6 people	Household	6	180000	1080000	216000	226800	237600	248400	259200	1188000	
4	Checkdam program on river	Meter	1500	3000	4500000	450000	472500	495000	517500	540000	2475000	
5	Fireline construction	No.	18	30000	540000	108000	113400	118800	124200	129600	594000	
6	Solar distribution and donation	Ha	100	10000	1000000	200000	210000	220000	230000	240000	1100000	
		No. of People									<b>8772000</b>	
<b>B</b>	<b>Community Development</b>											
1	Walking road construction (chepang-Ghueiyabari)	Cubic meter	6	50000	300000	100000	105000	110000			315000	
2	Ghueiyabari hatti damar walking road	Place	10	50000	500000	100000	105000	110000	115000	120000	550000	
3	Bridge made from wood construction	No.	6	200000	1200000	200000	210000	220000	230000	480000	1340000	
4	Hand pump installation	No.	10	50000	500000	100000	105000	110000	115000	120000	550000	
5	Pumpset for irrigation	No.	3	50000	150000		52500	55000	57500		165000	
6	User committee's building construction	Group	1	1200000	1200000	600000	630000				1230000	
7	Drinking water repair and improvement	No.	6	50000	300000	100000	52500	55000	57500	60000	325000	
8	School furniture support	Place	4	100000	400000	100000	105000	110000	115000		430000	

S.N.	Activities	Unit	Quantity	Rate	Amount	Year I	Year II	Year III	Year IV	Year V	Total amount	Remarks
9	Small hydropower project on Khapparekhola	Meter	1	500000	500000		525000	550000			1075000	
10	Road gravelling	Km	10	250000	2500000	250000	262500	275000	287500	300000	1375000	
<b>D</b>	<b>Conservation education</b>										<b>7355000</b>	
1	Furniture, labourer, house wiring, waiter, cook, plumbing, mobile tv repair, hair cutting, chair knitting, sweater and cap knitting, sewing cutting training	No. of People	72	7000	504000	100800	105840	110880	115920	120960	554400	
2	Bee farming training and (beecomb donation)	No. of People	9	10000	90000	90000					90000	
3	Hybrid species goat purchase and donation	Kg	3	80000	240000			88000	92000	96000	276000	
4	Basket making training and machine donation	No.	1	200000	200000		210000				210000	
<b>D</b>	<b>Conservation education</b>										<b>1130400</b>	
1	School program (drawing, quiz, essay competition, eloquition etc.)	Times	5	20000	100000	20000	21000	22000	23000	24000	110000	
2	Group, committee educational tour	Times	2	300000	600000		315000		345000		660000	
3	Ecoclub initiation support	Times	4	20000	80000		21000	22000	23000	24000	90000	
4	Hoading board construction	No.	10	20000	200000	40000	42000	44000	46000	48000	220000	
5	Public information meeting	Times	5	20000	100000	20000	21000	22000	23000	24000	110000	
6	Poster and Pamplet printing	Times	5	15000	75000	15000	15750	16500	17250	18000	82500	

S.N.	Activities	Unit	Quantity	Rate	Amount	Year I	Year II	Year III	Year IV	Year V	Total amount	Remarks
<b>E</b>	<b>Administrative Costs</b>										<b>1272500</b>	
1	Office stationery	Years	5	20000	100000	20000	21000	22000	23000	24000	110000	
2	Tiffin expenses during meeting	Years	5	20000	100000	20000	21000	22000	23000	24000	110000	
3	Communication and related expenses	Years	5	20000	100000	20000	21000	22000	23000	24000	110000	
4	1 office helper	Years	5	130000	650000	130000	136500	143000	149500	156000	715000	
5	Furniture purchase	Times	1	50000	50000		52500				52500	
6	Group, committee reformation	Times	1	50000	50000					60000	60000	
7	5 years operational plan formation	Times	1	50000	50000					60000	60000	
	<b>Total</b>										<b>1217500</b>	
											<b>19747400</b>	

**Annex VII-5  
Kohalpur BZUC**

S.N.	Activities	Unit	Quantity	Rate	Amount	Year I	Year II	Year III	Year IV	Year V	Total amount	Remarks
<b>A</b>	<b>Conservation Program</b>											
1	Spike fencing construction	Km	5	300000	1500000	300000	315000	330000	345000	360000	1650000	
2	Gauge construction (Meshjali)	Km	10	400000	4000000	800000	840000	880000	920000	960000	4400000	
3	Checkdam including gabin wire	Household			0	300002	315002.1	330002.2	345002.3	360002.4	1650011	
4	Ranighat chapargaudi and rohanikhola simruwa	Km	0.5	6000000	3000000	300000	315000	330000	345000	360000	1650000	
5	CF operational plan formation and renewal	No.	22	50000	1100000	200000	210000	220000	230000	260000	1120000	
6	Plantation	Ha	10	25000	250000	50000	52500	55000	57500	60000	275000	
7	Forest guard wage	No. of People	3	60000	180000	36000	37800	39600	41400	43200	198000	
8	Forest trail construction	Km	8	50000	400000	80000	84000	88000	92000	96000	440000	
9	Wetland management and pond construction	Cubic meter	4	250000	1000000	250000	262500	275000	287500		1075000	
		Place									<b>12458011</b>	
<b>B</b>	<b>Community Development</b>											

S.N.	Activities	Unit	Quantity	Rate	Amount	Year I	Year II	Year III	Year IV	Year V	Total amount	Remarks
1	Road gravelling	Km	5	300000	1500000	300000	315000	330000	345000	360000	1650000	
2	Deep boring construction	No.	3	300000	900000			330000	345000	360000	1035000	
3	Khadakbar irrigation canal construction	Group	3	100000	300000	150000	157500				307500	
4	Jorte canal repair	Km	3	50000	150000		52500	55000	57500		165000	
5	User committee program hall construction	No.	1	1000000	1000000				575000	600000	1175000	
6	Office compound wall construction	Meter	300	1000	300000			330000			330000	
7	View tower construction	No.	2	500000	1000000				575000	600000	1175000	
<b>C</b>	<b>Income generation and skill development</b>										<b>5837500</b>	
1	Furniture, Labourer, house wiring, plumbing, waiter, cook, motorcycle repair, mobile repair, sewing cutting, knitting, dill making, beautyparlour training	No. of People	100	10000	1000000	200000	200000	200000	200000	200000	1000000	
2	Mushroom farm training and seed distribution	No. of People	20	5000	100000	50000	52500				102500	

S.N.	Activities	Unit	Quantity	Rate	Amount	Year I	Year II	Year III	Year IV	Year V	Total amount	Remarks
3	Bee farming training	Kg	10	10000	100000			110000			110000	
4	Homestay initiation	No. of People	5	50000	250000				287500		287500	
5	Seedling purchase for lemon farming	No.	5000	100	500000	100000	105000	110000	115000	120000	550000	
											<b>2050000</b>	
<b>D</b>	<b>Conservation education</b>											
1	User group and committee's educational tour	Times	2	300000	600000		315000		345000		660000	
2	CBAPU and eco club educational tour	Times	1	300000	300000			330000			330000	
3	Hoading board consturction	No.	5	20000	100000	20000	21000	22000	23000	24000	110000	
4	Conservation education program in school	Times	5	25000	125000	25000	26250	27500	28750	30000	137500	
5	Celebration day	No.	10	20000	200000	40000	42000	44000	46000	48000	220000	
6	Wildlife friendly informative program	No.	10	20000	200000	40000	42000	44000	46000	48000	220000	
7	Conservation program broadcasting on radio, television	Times	5	15000	75000	15000	15750	16500	17250	18000	82500	
											<b>1760000</b>	

S.N.	Activities	Unit	Quantity	Rate	Amount	Year I	Year II	Year III	Year IV	Year V	Total amount	Remarks
<b>E</b>	<b>Administrative Costs</b>											
1	Stationery expenses	Years	5	30000	150000	30000	31500	33000	34500	36000	165000	
2	Tiffin expenses during meeting	Years	5	15000	75000	15000	15750	16500	17250	18000	82500	
3	Conservation related expenses	Years	5	15000	75000	15000	15750	16500	17250	18000	82500	
4	Office assistant's wage	Years	5	12000	60000	12000	12600	13200	13800	14400	66000	
5	Group, committee reformation program	Years	5	130000	650000	130000	136500	143000	149500	156000	715000	
6	5 years operational plan formation	Times	1	50000	50000					50000	50000	
7	Furniture purchase	Times	1	50000	50000					50000	50000	
											<b>1211000</b>	
											<b>23316511</b>	

**Annex VII-6**  
**Madhyabindu BZUC**

S.N.	Activities	Unit	Quantity	Rate	Amount	Year I	Year II	Year III	Year IV	Year V	Total amount	Remarks
<b>A</b>	<b>Conservation Program</b>											
1	Fencing including wiregauge construction	Km	8	40000	320000	64000	672000	704000	690000	720000	3426000	
2	Bio gas construction and donation	No.	90	15000	1350000	270000	283500	297000	310500	324000	1485000	
3	BZCF operational plan renewal	Household	6	30000	180000			66000	69000	72000	207000	
4	Group committee's legislation and operational plan formation	No.	6	10000	60000	60000					60000	
5	Fencing including plantation (walapur and agaya area)	No.	6	90000	540000	270000	283500				553500	
6	Fireline construction, repair, cleaning	Ha	26	15000	390000	78000	81900	85800	89700	93600	429000	
7	Pond construction	No. of People	3	300000	900000	300000			345000	360000	1005000	
8	View tower construction	No.	4	150000	600000		157500	165000	172500	180000	675000	
9	Encroachment control by activity initiation	Cubic meter	30	20000	600000	120000	126000	132000	138000	144000	660000	
10	Grassland management	Place	15	15000	225000	45000	47250	49500	51750	54000	247500	
11	Checkdam construction/repair	Place	3	500000	1500000		525000	550000	575000		1650000	
12	Recovery fund for victim	No.	1	500000	500000	250000	262500				512500	
											<b>10910500</b>	
<b>B</b>	<b>Community Development</b>	Group										
1	Road construction and gravel	Km	7	300000	2100000	420000	441000	462000	483000	504000	2310000	
2	Irrigation canal repair	Km	5	100000	500000				287500	300000	587500	

S.N.	Activities	Unit	Quantity	Rate	Amount	Year I	Year II	Year III	Year IV	Year V	Total amount	Remarks
3	Boring construction for community	Meter	6	100000	600000	300000	315000				615000	
4	School's drinking water tap construction	No.	3	20000	60000	30000	31500				61500	
5	User committee and Finance's building construction	No.	1	3000000	3000000		1575000	1650000			3225000	
6	Morgue house management support	Times	1	500000	500000	250000	262500				512500	
											<b>7311500</b>	
<b>C</b>	<b>Income generation and skill development</b>											
1	Homestay training and initiation support	Kg	1	1000000	1000000	500000	525000				1025000	
2	Plumbing, wiring, sewing knitting, computer repair, mobile repair training	No. of People	50	15000	750000	150000	157500	165000	172500	180000	825000	
3	Revolving fund initiation	No. of People	60	15000	900000	180000	189000	198000	207000	216000	990000	
4	Income generation support to reduce pressure on forest	No. of People	40	15000	600000	120000	126000	132000	138000	144000	660000	
											<b>3500000</b>	
<b>D</b>	<b>Conservation education</b>	Times										
1	Group, committee's educational tour	Times	2	300000	600000		315000		345000		660000	
2	Educational tour for students	Times	1	150000	150000			165000	0	0	165000	
3	Eco club support	Times	15	10000	150000	30000	31500	33000	34500	36000	165000	

S.N.	Activities	Unit	Quantity	Rate	Amount	Year I	Year II	Year III	Year IV	Year V	Total amount	Remarks
4	Youth involvement on antitheft and support on training and equipment	Times	5	100000	500000	100000	105000	110000	115000	120000	550000	
5	Celebration day	No.	15	10000	150000	30000	31500	33000	34500	36000	165000	
6	Hoading board construction	No.	6	20000	120000	24000	25200	26400	27600	28800	132000	
											<b>1837000</b>	
<b>E</b>	<b>Administrative Costs</b>											
1	Stationery	Years	5	24000	120000	24000	25200	26400	27600	28800	132000	
2	Tiffin expenses on meeting	Years	5	18000	90000	18000	18900	19800	20700	21600	99000	
3	Office assistant wage	Years	5	130000	650000	130000	136500	143000	149500	156000	715000	
4	Annual account monitoring	Years	5	15000	75000	15000	15750	16500	17250	18000	82500	
5	Conservation related expenses	Years	5	12000	60000	12000	12600	13200	13800	14400	66000	
6	Communication expenses	Years	5	12000	60000	12000	12600	13200	13800	14400	66000	
7	Group/committee reformation program	Times	1	50000	50000					50000	50000	
8	5 years operational plan formation	Times	1	50000	50000					50000	50000	
9	Furniture purchase	Times	1	50000	50000	50000					50000	
10	Computer and printer purchase	No.	1	80000	80000	80000					80000	
											<b>1390500</b>	
	<b>Total</b>										<b>24949500</b>	

**Annex VII-7**  
**Phurke Salli Malai BZUC**

S.N.	Activities	Unit	Quantity	Rate	Amount	Year I	Year II	Year III	Year IV	Year V	Total amount	Remarks
<b>A</b>	<b>Conservation Program</b>											
1	BZCF formation and reformation	Km	8	20000	160000	160000					160000	
2	Wiregauge construction	Km	5	400000	2000000	400000	420000	440000	460000	480000	2200000	
3	Checkdam construction	Household	500	3500	1750000	900000	892500				1792500	
4	Land conservation program (bio-engineering)	No.	5	75000	375000	75000	78750	82500	51750	54000	342000	
5	Forest guard wages for 2 person	No.	5	260000	1300000	260000	273000	286000	299000	312000	1430000	
6	Fireling repair and cleaning	Ha	10	15000	150000	30000	31500	33000	34500	36000	165000	
7	Water source conservation	No. of People	4	100000	400000	200000	210000				410000	
											<b>6499500</b>	
<b>B</b>	<b>Community Development</b>											
1	Electricity support	Cubic meter										
		Place	2	500000	1000000		525000		575000		1100000	
2	Vehicle road improvement and gravelling	Km	16	250000	4000000	500000	525000	550000	287500	300000	2162500	
3	User committee's building construction	No.	1	120000	120000	120000					120000	
4	Checkdam construction	Meter	250	2500	625000	200000	210000	247500			657500	
5	Drinking water construction	Group	8	200000	1600000	200000	210000	220000	230000	240000	1100000	
6	School fencing (spike fence)	Meter	300	1000	300000				345000		345000	

S.N.	Activities	Unit	Quantity	Rate	Amount	Year I	Year II	Year III	Year IV	Year V	Total amount	Remarks
											5485000	
<b>C</b>	<b>Income generation and skill development</b>	Meter										
1	Cook, waiter, mobile repair, wiring, sewing cutting, sweater knitting, bike repair training	No. of People	50	7000	350000	70000	73500	77000	80500	84000	385000	
2	Lemon farming and seedling donation	No.	1000	100	100000	20000	21000	22000	23000	24000	110000	
3	Shrubs and grass seedling purchase and donation	Years	5	50000	250000	50000	52500	55000	57500	69000	284000	
5	Lemon farming and seedling donation	No.	500	100	50000	10000	10500	11000	11500	12000	55000	
											5485000	
<b>D</b>	<b>Conservation education</b>	Kg										
1	School program (quiz, drawing, essay, road play etc.)	Times	5	20000	100000	20000	21000	22000	23000	24000	110000	
2	Public information meeting	Times	5	20000	100000	20000	21000	22000	23000	24000	110000	
3	Hoarding board construction	No.	5	20000	100000	20000	21000	22000	23000	24000	110000	
5	Tower construction for communication	No.	1	1000000	1000000	200000					200000	
6	Educational tour	Times	2	300000	600000		300000	0	345000	0	645000	
7	Ecoclub program and educational tour	Times	5	50000	250000	50000	52500	55000	57500	60000	275000	
8	Cleaning program	Times	5	10000	50000	10000	10500	11000	11500	12000	55000	

S.N.	Activities	Unit	Quantity	Rate	Amount	Year I	Year II	Year III	Year IV	Year V	Total amount	Remarks
9	Celebration day	Times	5	10000	50000	10000	10500	11000	11500	12000	55000	
											<b>1560000</b>	
<b>E</b>	<b>Administrative Costs</b>											
1	Stationery expenses	Years	5	15000	75000	15000	15750	16500	17250	18000	82500	
2	Tiffin expenses and communication during meeting	Years	5	15000	75000	15000	15750	16500	17250	18000	82500	
3	Conservation related expenses	Years	5	15000	75000	15000	15750	16500	17250	18000	82500	
4	Furniture	Years	1	50000	50000		50000				50000	
5	Group committee reformation program	Years	1	50000	50000					50000	50000	
6	5 years operational plan formation	Times	1	50000	50000					50000	50000	
7	Office helper (1 person)	Years	5	130000	650000	130000	136500	143000	149500	156000	715000	
											<b>1112500</b>	
	<b>Total</b>										<b>20142000</b>	

**Annex VII-8  
Purandhara BZUC**

S.N.	Activities	Unit	Quantity	Rate	Amount	Year I	Year II	Year III	Year IV	Year V	Total amount	Remarks
<b>A</b>	<b>Conservation Program</b>											
1	BZCF operational legislation formation	Km	6	75000	450000	75000	78750	82500	86250	180000	502500	
2	Wiregauge construction	Km	9	400000	3600000	800000	840000	880000	920000	480000	3920000	
3	Solar donation	Household	300	10000	3000000	600000	630000	660000	690000	720000	3300000	
4	Bio gas installation donation	No.	18	15000	270000	60000	63000	66000	51750	54000	294750	
5	Improved fireplace	No.	60	1500	90000	18000	18900	19800	20700	21600	99000	
		Ha									<b>8116250</b>	
<b>B</b>	<b>Community Development</b>	No. of People										
1	Suspension bridge construction (Babai river)	No.	2	5000000	10000000		1050000		1150000		2200000	
2	Road construction (westward from Jaljala)	Cubic meter	10	300000	3000000	300000	315000	330000	345000	360000	1650000	
3	Canal construction rigidly	Place	2000	300	600000	120000	126000	132000	138000	144000	660000	
4	Checkdam construction	Meter	250	2500	625000	200000	210000	247500			657500	
5	Drinking water construction (district simalkuna)	Meter	300	200	60000		315000		345000		660000	
6	Deep boring including solar pump formation	No.	2	700000	1400000	700000				840000	1540000	
7	Banchare drinking water repair (pipe purchase)	Group	400	100	40000	40000					40000	
8	Banchare school repair	Times	1	150000	150000		150000				150000	
9	Simalkuna school repair	Times	1	250000	250000			250000			250000	

S.N.	Activities	Unit	Quantity	Rate	Amount	Year I	Year II	Year III	Year IV	Year V	Total amount	Remarks
10	User committee building construction	Meter	1	1200000	1200000	600000	630000				1230000	
											<b>9037500</b>	
<b>C</b>	<b>Income generation and skill development</b>											
1	Cook, waiter, mobile repair, wiring, sewing cutting, sweater knitting, bike repair training	No. of People	60	10000	600000	120000	126000	132000	138000	144000	660000	
2	Agriculture farming training and seed donation	No. of People	15	5000	75000		75000				75000	
3	Bee farming training (including honeycomb bee donation)	No. of People	12	15000	180000			90000	103500		193500	
4	Pig farming (piglet donation)	Kg	12	15000	180000				90000	108000	198000	
5	Lemon farming (seed donation)	No.	500	100	50000	25000	26250				51250	
6	Hybrid species of goat purchase	No.	3	80000	240000		84000	88000	92000		264000	
7	Beating and pulping mill construction	No.	2	100000	200000	100000	105000				205000	
											<b>1646750</b>	
<b>D</b>	<b>Conservation education</b>	Times										
1	School program (quiz, drawing, essay, road play etc.)	Times	5	20000	100000	20000	21000	22000	23000	24000	110000	
2	Public information meeting	Times	5	20000	100000	20000	21000	22000	23000	24000	110000	
3	Hoarding board construction	No.	6	20000	120000	20000	21000	22000	23000	48000	134000	

S.N.	Activities	Unit	Quantity	Rate	Amount	Year I	Year II	Year III	Year IV	Year V	Total amount	Remarks
5	Tower construction for communication	No.	1	1000000	1000000	200000					200000	
6	Educational tour	Times	2	300000	600000		300000	0	345000	0	645000	
7	Eco club program and educational tour	Times	5	50000	250000	50000	52500	55000	57500	60000	275000	
8	Cleaning program	Times	5	10000	50000	10000	10500	11000	11500	12000	55000	
9	Celebration day	Times	5	10000	50000	10000	10500	11000	11500	12000	55000	
		Years									<b>1584000</b>	
<b>E</b>	<b>Administrative Costs</b>	Years										
1	Stationery expenses	Years	5	30000	150000	30000	31500	33000	34500	36000	165000	
2	Tiffin expenses for meeting	Years	5	15000	75000	15000	15750	16500	17250	18000	82500	
3	Conservation related expenses	Years	5	15000	75000	15000	15750	16500	17250	18000	82500	
4	communication expenses	Years	5	12000	60000	12000	12600	13200	13800	14400	66000	
5	Furniture purchase	Times	1	50000	50000		50000				50000	
6	Group committee reformation program	Times	1	50000	50000					50000	50000	
7	5 years operational plan formation	Times	1	50000	50000					50000	50000	
											<b>546000</b>	
	<b>Total</b>										<b>20930500</b>	

**Annex VII-9**  
**Rajkot BZUC**

S.N.	Activities	Unit	Quantity	Rate	Amount	Year I	Year II	Year III	Year IV	Year V	Total amount	Remarks
<b>A</b>	<b>Conservation Program</b>											
1	Fencing including wiregauge construction	Km	7	40000	280000	40000	42000	44000	92000	96000	314000	
2	Spike fencing construction	Km	3	10000	30000	10000	10500	11000			31500	
3	Open grazing control and management (seed distribution, chara dhund construction, chara machine purchase and mending initiation)	Household	10	15000	150000	30000	31500	33000	34500	36000	165000	
4	Safe farm construction	No.	50	10000	50000	10000	10500	11000	11500	12000	55000	
5	CF management training	No.	8	2000	16000	2000	2100	4400	4600	4800	17900	
6	CF legislation and operational plan renewal	Ha	5	3000	15000				10350	7200	17550	
7	Pond construction on CF	No. of People	2	15000	30000			16500	17250		33750	
8	Plantation for land degradation control	Ha	16	5000	80000	20000	21000	22000	23000		86000	
9	Checkdam for landslide	Cubic meter	250	1000	250000	25000	26250	27500	28750	30000	137500	
10	Support for forest guard	Place	5	16000	80000	16000	16800	17600	18400	19200	88000	
11	Grassland management	Ha	16	1000	16000	32000	33600	35200	36800	38400	176000	
											<b>9638000</b>	
<b>B</b>	<b>Community Development</b>											
1	Irrigation support (motor pipe)	Group	21	10000	210000	42000	44100	46200	48300	50400	231000	

S.N.	Activities	Unit	Quantity	Rate	Amount	Year I	Year II	Year III	Year IV	Year V	Total amount	Remarks
2	Wiregauge construction on community and village	Km	8	40000	320000	640000	672000	704000	736000	768000	3520000	
3	User committee's building construction	No.	1	150000	150000	800000	735000				1535000	
4	Construction of road and gravelling	Meter	2	500000	1000000	200000	210000	220000	230000	240000	1100000	
<b>D</b>	<b>Conservation education</b>											
1	Electrician, plumber, waiter, cook, nature guide training	No. of People	49	10000	490000	98000	102900	107800	112700	117600	539000	
2	Chicken farming, goat farming training	No. of People	28	7000	196000	39200	41160	43120	45080	47040	215600	
3	Herb farming training and seedling donation	Group	12	100000	1200000	240000	252000	264000	276000	288000	1320000	
4	Beautiparlour training and equipment donation	No. of People	12	50000	600000	120000	126000	132000	138000	144000	660000	
		Kg									<b>2734600</b>	
<b>D</b>	<b>Conservation education</b>											
1	Hoading board construction	No.	4	20000	80000	20000	21000	22000	23000		86000	
2	Conservation education broadcasting on radio and tv	Times	5	20000	100000	20000	21000	22000	23000	24000	110000	
3	Group, committee members' educational tour	Times	2	300000	600000		315000		345000	0	660000	
4	Fire control information meeting	Times	5	50000	250000	50000	52500	55000	57500	60000	275000	
5	Conservation program in school	Times	40	10000	400000	80000	84000	88000	92000	96000	440000	

S.N.	Activities	Unit	Quantity	Rate	Amount	Year I	Year II	Year III	Year IV	Year V	Total amount	Remarks
6	Training on rules and regulation for users	Times	10	20000	200000	40000	42000	44000	46000	48000	220000	
7	Leadership, account and conservation related training for user committee's members		5	20000	100000	20000	21000	22000	23000	24000	110000	
											<b>1901000</b>	
<b>E</b>	<b>Administrative Costs</b>											
1	Office assistant wage	Years	5	130000	650000	130000	136500	143000	149500	156000	715000	
2	Stationery	Years	5	20000	100000	20000	21000	22000	23000	24000	110000	
3	Furniture	Times	1	50000	50000	50000					50000	
4	Support for communication	Years	5	10000	50000	10000	10500	11000	11500	12000	55000	
5	Tiffin expenses during meeting	Years	5	20000	100000	20000	21000	22000	23000	24000	110000	
6	Conservation related expenses	Years	5	24000	120000	24000	25200	26400	27600	28800	132000	
7	House rent and electricity expenses	Years	3	4000	12000	4000	4200	4400			12600	
8	Group, committee reformation	Times	1	50000	50000					50000	50000	
9	Group, committee's 5 years operational plan formation	Times	1	50000	50000					50000	50000	
											<b>1284600</b>	
	<b>Total</b>										<b>15558200</b>	

**Annex VII-10**  
**Rapti BZUC**

S.N.	Activities	Unit	Quantity	Rate	Amount	Year I	Year II	Year III	Year IV	Year V	Total amount	Remarks
<b>A</b>	<b>Conservation Program</b>											
1	Fencing construction including wire gauge	Km	15	400000	6000000	1200000	1260000	1320000	1380000	1440000	6600000	
2	Plantation	Ha	30	30000	900000	180000	189000	198000	207000	216000	990000	
3	Fireline construction for fire control	Household	15	50000	750000	150000	157500	165000	172500	180000	825000	
4	Pond construction on CF	No.	5	200000	1000000	200000	210000	220000	230000	240000	1100000	
5	View tower construction	No.	3	500000	1500000			550000	575000	600000	1725000	
6	Crocodile monitoring program on rapti river	Ha	1	100000	100000	100000					100000	
7	Shrubs and grass management	No. of People	1	100000	100000	100000					100000	
8	6 forest guard wage	Years	5	100000	500000	100000	105000	110000	115000	120000	550000	
9	Bio gas donation	Cubic meter	25	10000	250000	50000	52500	55000	57500	60000	275000	
		Place									<b>12265000</b>	
<b>B</b>	<b>Community Development</b>											
1	Sauri jaruwa bairiya gabin wire filling	Cubic meter	500	10000	5000000	200000	210000	220000	230000	240000	1100000	80% peoples' checkdam or stakeholders
1	Road gravelling	Km	5	300000	1500000	300000	315000	330000	345000	360000	1650000	
2	Hyum pipe purchase and installation	Group	12	25000	300000	50000	52500	55000	86250	90000	333750	
3	Cause construction on saurikhola jaruwa road	No.	1	200000	2000000					480000	480000	80% peoples' checkdam or stakeholders

S.N.	Activities	Unit	Quantity	Rate	Amount	Year I	Year II	Year III	Year IV	Year V	Total amount	Remarks
4	Deep boring for water distribution and pipe installation work	Meter	1200	400	480000		252000	264000			516000	
5	User committee's building construction	Meter	1	1200000	1200000		630000	660000	0	0	1290000	
6	Machine purchase for irrigation	No.	15	20000	300000	60000	63000	66000	69000	72000	330000	
7	School's computer purchase	No.	4	50000	200000			110000	115000	0	225000	
8	Public toilet construction	No.	1	150000	150000	150000					150000	
											<b>6074750</b>	
<b>C</b>	<b>Income generation and skill development</b>											
1	Turmeric farming and seed donation	Kg	500	70	35000	17500	18375				35875	
2	Cook, waiter, furniture, labourer, house wiring, mobile repair, motorcycle repair, sewing cutting and knitting, chicken farming, goat farming training	No. of People	100	7000	700000	140000	147000	154000	161000	168000	770000	
3	Hybrid species cow and buffalo farming donation	No.	25	30000	750000	150000	157500	165000	172500	180000	825000	
4	Farm improvement program	No.	50	10000	500000	100000	105000	110000	115000	120000	550000	
5	Unseasonal vegetable farming training, seed donation	No. of People	25	10000	250000	50000	52500	55000	57500	60000	275000	
		Times									<b>2455875</b>	

S.N.	Activities	Unit	Quantity	Rate	Amount	Year I	Year II	Year III	Year IV	Year V	Total amount	Remarks
<b>D</b>	<b>Conservation education</b>											
1	Group/committee educational tour	Times	2	300000	600000		315000		345000		660000	
2	Hoading board construction	No.	5	20000	100000	20000	21000	22000	23000	24000	110000	
3	School program (essay, quiz, eloquition, debate etc.)	Times	5	20000	100000	20000	21000	22000	23000	24000	110000	
4	Program broadcasting on radio and tv	Times	5	25000	125000	25000	26250	27500	28750	30000	137500	
5	Youth initiation for antitheft (tiffin, recharge, torch light, raincoat support)	Years	5	100000	500000	100000	105000	110000	115000	120000	550000	
											<b>1567500</b>	
<b>E</b>	<b>Administrative Costs</b>											
1	Stationery	Years	5	24000	120000	24000	25200	26400	27600	28800	132000	
2	Tiffin expenses on meeting	Years	5	15000	75000	15000	15750	16500	17250	18000	82500	
3	Office assistant wage	Years	5	130000	650000	130000	136500	143000	149500	156000	715000	
4	Conservation related expenses	Years	5	12000	60000	12000	12600	13200	13800	14400	66000	
5	Communication expenses	Years	5	12000	60000	12000	12600	13200	13800	14400	66000	
6	Furniture purchase	Times	1	50000	50000	50000					50000	
7	House rent for office	Years	3	24000	72000	24000	25200	26400			75600	
8	Group/committee reformation	Times	1	50000	50000					50000	50000	
9	5 years operational plan construction	Times	1	50000	50000					50000	50000	
											<b>1287100</b>	
	<b>Total</b>										<b>23650225</b>	

## Annex-VIII

### Park and Security Management Office and Posts

S.N.	HQ / Sector / Range Post / Guard Post / Security Post	Place	No. of Office/Sector/Posts/Security unit			
			Park		NA	Both
			Office / Post	Hattisar		
1	NP Headquarter	Obhari, Banke				1
2	Western Sector Office	Kohalpur, Banke				1
3	Chisapani Security post	Chisapani, Banke				1
4	Hattidamar Ghuiyabari Rangepost	Kaprechaur, Salyan				1
5	Sutaiya Post	Naubasta, Sutaiya, Banke				1
6	Khadkabar Rangepost	Kohalpur, Banke		1		1
7	Mahadev Post	Mahadevpuri, Mahadeva, Banke				1
8	Dhakeri Range Post	Mahadevpuri, Dhakeri, Banke	1			
9	Changai Nala, Dhakeri	Dhakeri				
10	Buchapur Post	Mahadevpuri, Buchapur, Banke	1	1		
11	Sikta Post	Khaskusmachar, Sikta, Banke				1
12	Eastern Sector Office	Khaskusma, Kusum				1
13	Shiva khola Post	Khaskusma, Lauki Banke				1
14	Malai Rangepost	Panchakule, Majhgaon, Dang				1
15	Deurali Post	Chisapani, Deurali, Banke				1
16	Keureni Post	Purandhara, Keureni, Dang	1			
17	Khairee Post	Kachnapur, Zero, Banke			1	
18	Pragatinagar Post	Kohalpur, Banke			1	
	<b>Total</b>		<b>3</b>	<b>2</b>	<b>2</b>	<b>12</b>

Note: NA= Nepali Army

## Annex-IX

### Organization structure of BaNP

S.N.	Designation	Level	Approved Position	Status of fulfillment	
				Fulfilled	Vacant
1	Chief Conservation officer	Gazetted class II	1	1	0
2	Assistant conservation officer	Gazetted class III	3	3	0
3	Ranger	Non- Gazetted class I	11	10	1
4	Nayab Subba (Administration)	Non -Gazetted class I	1	1	0
5	Nayab Subba ( legal)	Non -Gazetted class I	1	1	0
6	Accountant	Non -Gazetted class I	1	1	0
7	Computer operator	Non -Gazetted class I	1	1	0
8	Kharidar	Non -Gazetted class II	5	3	2
9	Nayab Subba (Hattisar)	Non- Gazetted class I	1	1	0
10	Daroga (Hattisar)	Non -Gazetted class II	1	1	0
11	Fanit (Hattisar)	Class less	10	-	10
12	Pachhuwa (Hattisar)	Class less	10	-	10
13	Mahut (Hattisar)	Class less	10	10	0
14	Senior Game scout	Non- Gazetted class II	23	22	1
15	Game Scout	Class less	69	69	0
16	Office Assistant	Class less	2	2	0*
17	Driver	Class less	3	3	0*
	Total		153	129	24

\* Contract Service

## Annex-X

### Physical progress of previous years

S.N.	Description	Location	Fiscal Year							
			2067/068	2068/069	2069/070	2070/071	2071/072	2072/073	2073/074	2074/075
	<b>A. Building Construction</b>									
A1	Head quarter office	Obhari		1						
A2	Western Sector office	Kohalpur		1						
A3	Eastern Sector office	Kusum		1						
A4	Sutaiya post	Sutaiya		1						
A5	Shivkhola post	Shivkhola post		1						
A6	Buildings at Security head quarter	Obhari		1	1	3	1			
A7	Sutaiya Post	Sutaiya			1					
A8	Mahadeva security post	Mahadeva		1						
A9	Buchapur post	Buchapur		1						
A10	Khadkabar security post	Khadgabar		1						
A11	Mahadeva range post	Mahadeva			1					
A12	Garage for vehicles	Obhari			2					
A13	House for Park offenders	Obhari			1					
A14	Ghuiyabari post	Ghuiyabari Salyan			1					
A15	Western Sector office	Kohalpur				1				
A16	BZMC office	Kohalpur						1		
A17	Shivkhola check post	Shivkhola post				1				
A18	Malaijaljala security post	Malaijaljala Dang				1	1			
A19	Deurali post	Deurali post				1				
A20	Malaijaljala range post	Malaijaljala Dang					1			
A21	Dhakeri range post	Dhakeri					1			
A22	Bikashnagar security post						1			
A23	Eastern sector office	Kusum						1		
A24	Residence building for staffs	Obhari					2			
A25	Chisapani post	Chisapani						1		

S.N.	Description	Location	Fiscal Year							
			2067/068	2068/069	2069/070	2070/071	2071/072	2072/073	2073/074	2074/075
A26	Khairee security post	khairee						1		
A27	Pragatinagar security post	Pragatinagar						1		
A28	Keureni security post	Purandhara						1		
A29	Residential building for staffs	Obhari						1		
A30	Deurali security post	Deurali							1	
A31	Deurali post	Deurali							1	
A32	Security post at Sikta	Sikta							1	
A33	Building construction at Hattisar	Khadgabar							1	
A34	Building construction at Hattisar	Changainala Dhakeri							1	
A35	Residential building	Obhari							1	
A36	Building for park offenders	Obhari							1	
A37	Thanti range post	Thanti Dang								1
A38	Khairee range post	Khairee								1
A39	Pragatinagar range post	Pragatinagar								1
A40	Shade house for elephant	Changainala Dhakeri							1	
A41	Shade house for elephant	Buchapur							1	
A42	Shade house for elephant	Khadkabar							1	
A43	Raise platform to climb on elephant back	Khadkabar							1	
A44	Raise platform to climb on elephant back	Dhakeri							1	
A45	Shivkhola range post	Shivkhola							1	
A46	Construction of waiting place (gol ghar)	Obhari							1	
A47	Waiting place (gol ghar)	Kohalpur				1				
A48	Waiting place (gol ghar)	Khadkabar								1
<b>B. Fireline</b>										
B1	145 Km Fireline Construction/repair	Obhari too								
B2		Jalseni to Mahadeva								
B3		Mahadeva to Khadkabar								

S.N.	Description	Location	Fiscal Year							
			2067/068	2068/069	2069/070	2070/071	2071/072	2072/073	2073/074	2074/075
B4		Khadkabar to Sutaiya								
B5		Giddeni chaur to Bikasnagar								
B6		Sutiya to Hattigauda								
B7		Karaute khola to Hattisaar Chisapani								
B8		Obhari to Thuriya by Kailashe								
B9		Kailashe to Khairee khola								
B10		Highway to Khairee khola								
B11		Ghandheli to Khairee khola								
B12		Ghandheli to Paani muhan road								
B13		Aagaiya highway to Pani muhan								
B14		Gabar to Chure Phedi								
B15		Khadkabar to Ghuiyabari jhyang way								
B16		Thuriya to Amila bari by kwereni road								
B17		Kusum Beriya to Malai by Dholpur								
B18		Highway to Shiruwakhola Grassland								
	<b>C. Watch Towers</b>									
C1	Wooden watch tower (black)	Obhari		1						
C2	Wooden watch tower	Giddeni chaur			1					
C3	Wooden watch tower	Thuriya Khola			1					
C4	Wooden watch tower	Jalseni				1				

S.N.	Description	Location	Fiscal Year							
			2067/068	2068/069	2069/070	2070/071	2071/072	2072/073	2073/074	2074/075
C5	Wooden watch tower	Gotheri				1				
C6	Wooden watch tower	Perhawa Chatiya				1				
C7	Wooden watch tower	Kusum					1			
C8	Wooden watch tower	Shivkhola								1
C9	Wooden watch tower	Jhadi Khahare								1
C10	Wooden watch tower	Ghandheli								1
C11	Construction of Tiger Holding cage	Khairee Khola							1	
C12	RCC watch tower	Shyalmaare							1	
C13	RCC watch tower	Kailashe						1		
C14	RCC watch tower	Khairee Khola							1	
C15	RCC watch tower	Giddeni chaur								1
C16	Construction of wild animal rescue cage	Khairee Khola								1
D. Grassland										
D1	Grassland management	Thuriya		20						
D2		Giddeni chaur			20					
D3		Jalseni			10					
D4		Kailashe					5			
D5		Chauka Phanta						5		
D6		Jhadi Khahare					5			
D7		Katauree						10		
D8		Gotheri					20			
D9		Tallo Dobai					10			
D10		Mathillo Dobai					10			
D11		Muguwa						15		
D12		Gandheli							20	
D13		Buchapur grassland					20			
D14		Gabar Shirukholi								10
D15		Gabar chure fedo							10	
E. Wetlands										
E1	Wetlands and waterholds	Giddheni chaur								
E2		Jalseni								
E3		Thuriya								
E4		Jhijheri CF Dhakeri								

S.N.	Description	Location	Fiscal Year							
			2067/068	2068/069	2069/070	2070/071	2071/072	2072/073	2073/074	2074/075
E5		Changainala Dhakeri								
E6		Buchapur								
E7		Gotheri								
E8		Khairee								
E9		Paani Muhan								
E10		Rani talau								
E11		Bakshwa Khola								
E12		Janashrit CF								
E13		Boringwasti								
E14		Ghandheli								
E15		Sauree								
E16		Karautee								
E17		Khadkabar								
E18		Aamapkholi								
E19		Jalkalyan CF								
E20		Bikasnagar								
E21		Gabar								
E22		Near Obhari (Iepa Pokhari)								
E23		Near Obhari fireline								
E24		Sano tappar								
E25		Shivkhola								
E26		Kale khola								

## Annex-XI

### Calculation and allowable quantity of sand, gravel and boulder from different rivers of BZ

S.N.	Name of UC	Name of rivers	Length (m)	Width (m)	Depth (m)	Total Volume	Allowable Volume 50%
1	Kohalpur BZUC	Ranighat	4000	100	0.5	200000	100000
		Tharubas	1500	30	0.5	22500	11250
		Baksuwa khola	1500	30	0.5	22500	11250
		Duduwa khola	1500	60	0.5	45000	22500
		Jorhatte	800	25	0.5	10000	5000
		Syalmare	1500	30	0.5	22500	11250
2	Deurali Hariyali BZUC	Karauti and Kathauti	3500	70	0.5	122500	61250
		Gau kholi	2500	50	0.5	62500	31250
		Jethi Nala	3500	70	0.5	122500	61250
3	Hattidamar Ghuiyabari BZUC	Babai river	10000	60	0.5	300000	150000
4	Dhakeri BZUC	Jhijhari	800	50	0.5	20000	10000
		Bangesal	1500	30	0.5	22500	11250
5	Madhyabindu BZUC	Paruwakhola	800	60	0.5	24000	12000
		Sukhar	2000	60	0.5	60000	30000
		Gandheli	1600	30	0.5	24000	12000
		Jhuri	3500	60	0.5	105000	52500
6	Rapti BZUC	Rapti river	8000	100	1	800000	400000
		Lumba	1600	60	0.5	48000	24000
		Kale khola	1500	60	0.5	45000	22500
		Khoche khola	1500	60	0.5	45000	22500
		Sauri khola	1200	50	0.5	30000	15000
		Gabhar khola	1100	125	0.5	68750	34375
		Bairia	1700	60	0.5	51000	25500
7	Rajkot BZUC	Banseri Banskholi	800	50	0.5	20000	10000
		Shivkhola	1400	30	0.5	21000	10500
		Til kanya	1800	30	0.5	27000	13500

S.N.	Name of UC	Name of rivers	Length (m)	Width (m)	Depth (m)	Total Volume	Allowable Volume 50%
		Gothlewa	700	25	0.5	8750	4375
		Oj Khola	2500	50	0.5	62500	31250
		Dadhkholi	900	60	0.5	27000	13500
		Bhatti khola	800	40	0.5	16000	8000
		Rapti river	15000	100	0.5	750000	375000
		Bharle / jharle	5000	80	0.5	200000	100000
8	Malai Jaljala BZUC	Babai river	7000	70	0.5	245000	122500
		Malai jaljala	10000	70	0.5	350000	175000
9	Purandhara BZUC	Babai river	8000	60	0.5	240000	120000
<b>Total Volume</b>						<b>4240500</b>	<b>2120250</b>

## Annex-XII

### Landcover details in BaNP and its BZ

(Source: Topographic Maps, DoS, GoN, 1994/98)

Banke National Park		
S.N.	Landcover Class	Area km <sup>2</sup>
1	Barren land	0.28
2	Bush	31.41
3	Cultivation	2.40
4	Forest	512.24
5	Grassland	0.90
6	Pond or Lake	0.00
7	Sand	15.03
8	Water bodies	0.12
<b>Total</b>		<b>562.37</b>

Buffer Zone		
S.N.	Landcover Class	Area km <sup>2</sup>
1	Barren land	0.16
2	Built Up	0.02
3	Bush	23.37
4	Cultivation	36.33
5	Forest	258.21
6	Grassland	1.95
7	Orchard	0.03
8	Pond or Lake	0.01
9	Sand	18.92
10	Water bodies	5.71
<b>Total</b>		<b>344.69</b>

## Annex-XIII

### Traditional use right of way (fireline), canal going through park and cultural sites

#### XIIIA: Right of way that is used as traditional use right foot trail

S.N.	Description	Remarks
1	Thuriya- Amilabari- Hattidamar	Foot trail
2	Thuriya- Amilabari-Jila	Foot trail
3	Aagaiya- Deurali- Jaljala	Foot trail
4	Khadkabar- Aambas- Ghuiyabari	Foot trail and proposed motor road

#### XIIIB: Irrigation Canal that goes through core area and BZ

S.N.	Canal	Location
1	Obhari Farmer canal	Rapti Sonari 8, Banke
2	Hattigauda Chyama (Large) canal	Baijanath 1, Banke
3	Kakawa canal	Baijanath 1, Banke
4	Aamkholi Khadkabar canal	Koholpur 13, Banke
5	Jorhattey Dauna canal	Koholpur 13, Banke
6	Jhijhari Bageysal, Uddyan canal	Rapti Sonari 9, Banke
7	Jhijhari Mahadev village canal	Rapti Sonari 9, Banke
8	Paruwa river Perani canal	Rapti Sonari 8, Banke
9	Lumba river sikta Gotheri canal	Rapti Sonari 1, Banke
10	Lamitaal Bairiya canal	Rapti Sonari 1, Banke
11	Katseni Aagaiya drinking water	Rapti Sonari 2, Banke
12	Kukurgauda kusum drinking water	Rapti Sonari 1, Banke
13	Rajawas kusum drinking water	Rapti Sonari 1, Banke
14	Shiv river drinking water	Rapti Sonari 1, Banke

#### XIIIC: Religious cultural sites of the Park

S.N.	Religious/cultural sites	Place
1	Deuti Bajai temple	Deurali Dada
2	Jhakri temple	Jhijhari Chure
3	Kukurgauda	Way to Dang from Kusum

## Annex-XIV

### Participants of the meetings

#### Annex XIV-1 : Participants of the Task-force meeting

2073/09/18

S.N.	Name	Designation	Organization
1	Dil Bahadur Purja Pun	CCO	BaNP, Obhari
2	Saraswoti Sapkota	Assistant Planning Officer	DNPWC
3	Bishnu Prasad Thapaliya	Assistant Management Officer	DNPWC
4	Santosh Kumar Bhagat	Ranger	DNPWC

#### Annex XIV-2: Participants of BZMC meeting

2073/11/02

S.N.	Name	Designation	Organization
1	Dil Bahadur Purja Pun	CCO	BaNP
2	Sabitra Pun	Chairperson	Kohalpur BZUC
3	Krishna Bahadur Chaudahary	Chairperson	Deurali Hariyali BZUC
4	Shiva Kumar Rana	Chairperson	Thakeri BZUC
5	Harka Bahadur Bista	Chairperson	Madhyabindu BZUC
6	Bal Bahadur Gharti	Chairperson	Rapti BZUC
7	Gehendra Kumar Khadka	Chairperson	Rajkot BZUC
8	Gammar Bahadur Gharti	Chairperson	Phurkesalli Malai BZUC
9	Pokhar Singh Budha	Chairperson	Purandhara BZUC
10	Dambar Bahadur Pun	Chairperson	Hattidamar Ghuiyabari BZUC
11	Lal Bahadur Bhandari	ACO	BaNP
12	Saurav Shrestha	PA management Expert	SDIC Nepal
13	Anil Kumar Ram	Ranger	BaNP
14	Ran Bahadur Thapa	Kharidar	BaNP
15	Kripal Chaudhary	CCF	TAL PABZ
16	Chitra Bahadur Malla	Treasurer	Kohalpur BZUC
17	Chabi Lal Pande	Member	Kohalpur BZUC
18	Rajan Pandit	Ranger	BaNP
19	Akshya Chadhary	Ranger	BaNP
20	Dilli Ram Dhakal	Major	Gorakhdal Gan, Obhari
21	Pramod Kumar Yadav	ACO	BaNP
22	Tika Ram Paudel	BZ Expert	SDIC

### Annex XIV-3: Participants of the meeting

2073/11/03

S.N.	Name	Designation	Organization
1	Dil Bahadur Purja Pun	CCO	BaNP
2	Sabitra Pun	Chairperson	Kohalpur BZUC
3	Krishna B. Chaudahary	Chairperson	Deurali Hariyali BZUC
4	Shiva Kumar Rana	Chairperson	Dhakeri BZUC
5	Harka Bahadur Bista	Chairperson	Madhyabindu BZUC
6	Bal Bahadur Gharti	Chairperson	Rapti BZUC
7	Gehendra Kumar Khadka	Chairperson	Rajkot BZUC/BZMC
8	Gambar Bahadur Gharti	Chairperson	Phurkesalli Malai BZUC
9	Pokhar Singh Budha	Chairperson	Purandhara BZUC
10	Dambar Bahadur Pun	Chairperson	Hattidamar Ghuiyabari BZUC
11	Lal Bahadur Bhandari	Asst. Conservation Officer	BaNP
12	Saurav Shrestha	PA Management Expert	SDIC Nepal
13	Anil Kumar Ram	Ranger	BaNP
14	Kripal Chaudhary	CCF	TAL PABZ
15	Chitra Bahadur Malla	Treasurer	Kohalpur BZUC
16	Chabi Lal Pande	Member	Kohalpur BZUC
17	Rajan Pandit	Ranger	BaNP
18	Akshya Chadhary	Ranger	BaNP
19	Bishnu Kumari Adhikari	Assistant Planning Officer	Ministry of Forest and Soil conservation (MoFSC)
20	Bimala Bhusal	Section Officer	DNPWC
21	Pramod Kumar Yadav	Asst. Conservation Officer	BaNP
22	Rabin Chaudhary	ACO	BaNP
23	Kun Narayan Chaudhary	Ranger	BaNP
24	Labjung Thapa	Na Su	BaNP
25	Mohan Sapkota	Na Su	BaNP
26	Padam Bahadur Buda	Ranger	BaNP
27	Ran Bahadur Thapa	Kharidar	BaNP
28	Dilli Ram Dhakal	Acting Lt. Colonel	Gorakhdal Gan

## Annex XIV-4 : Participants of BZMC meeting

2074/02/20

S.N.	Name	Designation	Organization
1	Gehendra Kumar Khadka	Chairperson	BZMC
2	Sabitra Pun	Chairperson	Kohalpur BZUC
3	Krishna B. Chaudhary	Chairperson	Deurali-Hariyali BZUC
4	Shiva Kumar Rana	Chairperson	Dhakeri BZUC
5	Gambar Bahadur Gharti	Chairperson	Furke Sallli Malai BZUC
6	Chet Bahadur Buda	Secretary	Madhyabindu BZUC
7	Thaman B. Bhandari	Treasurer	Rapti BZUC
8	Dil B. Purja Pun	CCO	BaNP
9	Jayendra K.C.	Lt. Colonel, Gorakh Dal Gan	Nepal Army
10	Pawan Gautam	Field Coordinator	ZSL Nepal
11	Kripal Chaudhary	Field Officer	TAL Program
12	Labjung Thapa	Nayab Subba	BaNP
13	Puskar Raj Basnet	Computer Operator	BaNP
14	Lal B. Bhandari	ACO	BaNP
15	Sarmila Nepal	Ranger	BaNP
16	Krishna Lal Chaudhary	Chairperson	CBAPU-Network
17	Prem B. Pun	Secretary	Kohalpur BZUC

## Annex XIV-5 : Participants of the staff meeting

2074/02/30

S.N.	Name	Designation	Organization
1	Dil B. Purja Pun	CCO	BaNP
2	Lal B. Bhandari	ACO	BaNP
3	Rabin Chaudhary	ACO	BaNP
4	Pramod Kumar Yadav	ACO	BaNP
5	Mohan Sapkota	Nayab Subba	BaNP
6	Labjung Thapa	Nayab Subba	BaNP
7	Kunnarayan Chaudhary	Ranger	BaNP
8	Ran B. Thapa	Kharidar	BaNP
9	Biju Paudel	Ranger	BaNP
10	Saurav Shrestha	PA Management Expert	SDIC

## Annex XIV-6 : Participants of the meeting

2074/04/14

S.N.	Name	Designation	Organization
1	Dil B. Purja Pun	CCO	BaNP
2	Man Bahadur Ruchal	Chairperson	Baijanath Rural Municipality
3	Gehendra Kumar Khadka	Chairperson	BZMC
4	Vagiram Chaudhary	Chairperson	Dangisaran Rural Municipality
5	Rajan K.C.	Major	Shree Shree Mehar Battallion
6	Sabitra Pun	Chairperson	Kohalpur BZUC
7	Pramod Kumar Yadav	ACO	BaNP
8	Krishna Lal Chaudhary	Chairperson	CBAPU-Network
9	Dhani Kumari Khatri	Vice Chairperson	Rapti Sonari Rural Municipality
10	Chandra B.Oli	Ward Chairperson	Rapti Sonari Rural Municipality
11	Juleena Joshi	Account and Admin Officer	SDIC
12	Gangadatta Jaisi	Operator	Gaver valley Homestay
13	Bhimsingh Rokaya	Member	CBAPU
14	Padam B. Buda	Ranger	BaNP
15	Krishna Khadka	Senior Game Scout	BaNP
16	Khagendra Chhatyal	Senior Game Scout	BaNP
17	Chandra B. Buda	Game Scout	BaNP
18	Sarmila Nepal	Ranger	BaNP
19	Lokendra Buda	Game Scout	BaNP
20	Santa B. Bika	Game Scout	BaNP
21	Shiva Kumar Rana	Chairperson	Dhakeri BZUC
22	Bal Bahadur GM	Chairperson	Rapti BZUC
23	Pawan Gautam	Field Coordinator	ZSL Nepal
24	Subhadra Sharma	Assistant Botanist	District Plant Office
25	Tek Bahadur Nepali	Assistant Forest Officer	District forest Office, Banke
26	Ambika Pd. Khatiwada	OIC	NTNC
27	Saurav Shrestha	PA Management Expert	SDIC
28	Gammer B. Gharti	Chairperson	Furkesalli Malai BZUC
29	Subed Yami		Rapti Sonari Rural Municipality
30	Anil kumar Ram	Ranger	BaNP
31	Biju Paudel	Ranger	BaNP
32	Lal B. Bhandari	Asst. Conservation Officer	BaNP
33	Rabin Chaudhary	Asst. Conservation Officer	BaNP
34	Harka B. Bista	Chairperson	Madhyabindu BZUC
35	Pralad Khadka	Field Officer	TAL-CBRP, WWF Nepal
36	Kripal Chaudhary	Field Officer	TAL-PABZ
37	Ram B. Rawat	Journalist	Pipalbot Dainik
38	Amrita K.C.	Chairperson	Nepal Tourism Press Association
39	Kamala Hamal	Journalist	Krishnasar FM, Nepalgunj

## Annex XIV-7 : Participants of final sharing meeting at DNPWC

Date: 2074/06/23

S.N.	Name	Designation	Organization
1	Man Bahadur Khadka	Director General	DNPWC
2	Gopal Prakash Bhattari	Deputy Director General	DNPWC
3	Dr. Maheswor Dhakal	Chief, Biodiversity and Environment division	Ministry of Forest and Soil Conservation
4	Sher Singh Thagunna	Deputy Director General	DNPWC
5	Shyam Bajimaya	Former Director General	DNPWC
6	Sidhartha Badracharya	Executive Officer	NTNC
7	Barun Bahadur Thapa	Former Chief Conservation Officer	DNPWC
8	Bed Kumar Dhakal	Chief Conservation Officer	ShNP
9	Laxman Prasad Paudel	Ecologist	DNPWC
10	Tularaj Sunuwar	Under Secretary	DNPWC
11	Bishnu Prasad Shrestha	Conservation Education Officer	DNPWC
12	Sushma Rana	Investigation Officer	DNPWC
13	Dr. Naresh Subedi	Senior Manager	NTNC
14	Dr. Salu Adhikari	Biodiversity Advisor	HB/WWF Nepal
15	Bhogendra Rayamajhi	Senior Programme Officer	ZSL Nepal
16	Bhwaraj Joshi	Under Secretary	DNPWC
17	Puspa Pandey	Programme Officer	WWF Nepal
18	Rupak Maharjan	Asst. Investigation Officer	DNPWC
19	Krishna Prasad Bhusal	Vulture Conservation Officer	BCN
20	Bhupendra Prasad Yadav	Asst. Ecologist	DNPWC
21	Ek Narayan Sharma	Account Officer	DNPWC
22	Pramila Neupane	Ranger	DNPWC
23	Sarita Lama	Ranger	DNPWC
24	Kabita Bhandari	Computer Operator	DNPWC
25	Dil Bahadur Purja Pun	Chief Conservation Officer	BaNP
26	Saurav Shrestha	Consultant	SDIC
27	Bishnu Prasad Thapaliya	Asst. Management Officer	DNPWC

## Annex-XV

### Management Plan Preparation Team

S.N.	Name	Designation	Office
1	Dil Bahadur Purja Pun	CCO/Team Leader	BaNP
2	Bishnu Pd. Thapaliya	Assistant Management Officer/member	DNPWC
3	Sarswoti Sapkota	Assistant Planning Officer/member	DNPWC
4	Lal Bahadur Bhandari	ACO	BaNP
5	Saurav Shrestha	Consultant/Management Plan Preparation Expert	SDIC
6	Bhola Nath Dhakal	GIS Expert	DNPWC
7	Tika Ram Poudel	Consultant/BZ	SDIC
8	Smrita Acharya	Support staff	SDIC
9	Sunam Shrestha	Support staff	SDIC
10	Ushma Gyawali	Support staff	SDIC

## Annex-XVI

### Reviewer of the Management Plan

S.N.	Name	Designation	Office
1	Man Bahadur Khadka	Director General	DNPWC
2	Gopal P. Bhattarai	Deputy Director General	DNPWC
3	Shyam Bajimaya	Former DG/PA Management Expert	Free lance Expert
4	Ganesh Pant	CCO	Sagarmatha NP



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**Ministry of Forests and Environment**  
**Department of National Parks and Wildlife Conservation**



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