

**Report on the
Facts and Issues on Poaching of Mega Species
and
Illegal Trade in Their Parts in Nepal**

**Study Commissioned by
Transparency International Nepal**

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October 2009

Table of Contents

Abbreviations and Acronyms	4
Acknowledgements	6
Foreword	7
Executive Summary	9
1. Background	13
1.1 Objectives	13
1.2 Methodology	13
1.3 Scope and Limitations	14
2. Assessment of the Status of Poaching and Illegal Trade	14
2.1 Mega species	14
2.1.1 Rhinoceros	14
2.1.2 Tiger	16
2.2 Poaching	17
2.3 Illegal trade	18
3. Review of the Institutional and Legal Framework and Gaps	20
3.1 Review	20
3.1.1 Policies, Strategies and Plans	20
3.1.2 Acts and Regulations Pertinent to Wildlife	22
3.1.3 Other Relevant Acts and Regulations	26
4. Investigation and Analysis of Poaching and Illegal Trade	30
4.1 Linkages between Poaching and Illegal Trade	30
4.2 Institutional and Legal Gaps	31
4.2.1 Institutional Gaps	31
4.2.2 Policy Gaps	36
4.3 Actors involved in Poaching and Illegal Trade	41
5. Conclusions, Recommendations and Action Plan	43
5.1 Conclusions	43
5.1.1 Management and Protection of Wildlife	43
5.1.2 System and Ways of Poaching and Illegal Trade	46
5.1.3 Effectiveness of Policies and Institutions in Poaching and Illegal Trade	47
5.2 Recommendations	51
5.3 Actions Suggested	53
Bibliography	58

List of Tables	Page
Table 1. Estimate of Chitwan Rhino Population	14-15
Table 2. Rhino Translocations	15
Table 3. Contributions of Institutions in Anti-poaching and Anti-Illegal trade	54

List of Figures	Page
1. Estimate of Rhinoceros Population in Chitwan	15
2. Rhinoceros Mortality (1973-2003)	16
3. Rhinoceros Mortality (1992/93 – 2006/07)	16
4. Tiger Mortality in Protected Areas	17
5. Enforcement Gap Outside Protected Areas	38
6. Inter-relationships between various Institutional Stakeholders	55

List of Boxes	Page
1. Jail inmates	42
2. Silent partners	42
3. Chepang communities (Manahari VDC, Makawanpur)	42

List of Annexes

Annex 1. Snow-balling Sampling Approach

Annex 2. Checklists for II, FGD and CM Questions

Annex 3. List of Respondents

Abbreviations and Acronyms

AO	Associated objectives
APO	Anti-poaching operation
APU	Anti-poaching units
BNP	Bardia National Park
BS	Bikram Sambat
BZ	Buffer zone
BZCF	Buffer Zone Community Forest
BZMC	Buffer Zone Management Committee
BZMR	Buffer Zone (Management) Regulations
BZUC	Buffer Zone User Committee
CA	Conservation Area
CAGMR	Conservation Area Government Management Regulations
CAMR	Conservation Area Management Regulations
CAPO	Community Based Anti-poaching Operations
CDO	Chief District Officer
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CM	Consultative Meetings
CNP	Chitwan National Park
DFO	District Forest Office
DNA	Deoxyribonucleic acid
DNPWC	Department of National Parks and Wildlife Conservation
DoF	Department of Forests
DPR	Department of Plant Resources
EIA	Environmental Investigation Agency
EO	Expected outputs
FGD	Focus group discussions
FY	Fiscal Year
HR	Hunting Reserve
ICIMOD	International Center for Integrated Mountain Development
IECA	Import and Export (Control) Act
IEE	Initial Environmental Evaluation
II	Interactive interviews
INGOs	International Nongovernmental Organization
ITNC	International Trust for Nature Conservation
IUCN	International Union for Nature Conservation
LNP	Langtang National Park
MFSC	Ministry of Forests and Soil Conservation
MoU	Memorandum of Understanding
MPFS	Master Plan for the Forestry Sector
NA	Nepal Army
NAFOL	National Forensic Science Laboratory
NBS	Nepal Biodiversity Strategy
NCS	National Conservation Strategy for Nepal
NEPAP	Nepal Environmental Policy and Action Plan
NGO	Nongovernmental Organization
NHM	Natural History Museum
NP	National Park
NPWC Act	National Parks and Wildlife Conservation Act
NPWCR	National Parks and Wildlife Conservation Regulation
NTFP	Non-timber forest products
NTNC	National Trust for Nature Conservation

PA	Protected Areas
SACEP	South Asian Co-operative Environment Program
SA-WEN	South Asian Wildlife Enforcement Network
SAWTI	South Asian Wildlife Trade Initiative
SHL	Sacred Himalayan Landscape
SNV	The Netherlands Development Organization
TAL	Terai Arc Landscape
TIN	Transparency International Nepal
TRAFFIC	Trade Records Analysis of Flora and Fauna in Commerce
TRCI	Tiger Rhino Conservation Initiative
VDC	Village Development Committee
WR	Wildlife Reserve
WWF	World Wildlife Fund
YCL	Young Communist League

Acknowledgements

This study entitled 'the Facts and Issues on Poaching of Mega Species and Illegal Trade in Their Parts in Nepal' has been made possible largely through the participation and responses of stakeholders and actors in their given field. On behalf of the study team as well as Transparency International-Nepal, I would like to extend my sincere thanks to all the participating respondents for providing invaluable information and expertise.

Special thanks are owed to Mr Shyam Bajimaya, Director General of the Department of National Parks and Wildlife Conservation (DNPWC), Chief Wardens of the national parks and other officials of DNPWC for their frank opinions. Thanks are due to senior officials of the Nepal Army, Nepal Police, Department of Forests, Department of Customs, National Forensic Laboratory and other government line agencies for their succinct views. Similarly, several academic and nongovernmental organizations: IUCN Nepal, Resources Himalaya, Wildlife Conservation Nepal and Wildlife Watch Group deserve special thanks for their professional ideas and expertise.

I fully appreciate the interest and cooperation shown by the representatives of the WWF Nepal office in making this study a reality.

Dr Ganesh Man Gurung

Coordinator - Study Team

Vice President, Transparency International Nepal

Foreword

Transparency International Nepal (TIN) is thankful to WWF Nepal for entrusting TIN with the challenging and onerous task of undertaking a study to uncover the facts and issues on poaching of mega species and illegal trade in their parts in Nepal. Prof. Dr. Ganesh Man Gurung, Vice President of TIN, coordinated this study which has been conducted with the involvement and support of eminent conservationists and experts in Nepal.

In Nepal, the incidence of poaching increases whenever political instability in the country is twinned with a weak government. The nexus of high profile politicians, bureaucrats, police, army, border administration and customs take advantage of this prevailing situation. There is a high demand for rhino horns and hooves, tiger skins, bone and meat, bear bile and musk-deer-pod in national, regional and international markets.

There are only two habitats of the one horned rhino in the world - Nepal and Assam, India. Experts have observed that whenever incidences of poaching increase in one, it decreases in the other. This indicates a nexus of operators on a regional basis. The nexus of poachers and illegal traders of wildlife parts can be broken by the concerted effort and action of all interrelated and concerned agencies at the national and regional level.

The laws related to forests, national parks, wildlife and buffer zones are in need of revision and update in view of the epochal change that has happened both in Nepal and globally - especially in the field of information technology. Poachers and traders are using the latest fire arms, transport and communications equipment. The guardians of parks and wildlife thus need to be equally equipped to confront and deter them.

So far, the conservation of parks and the protection of wildlife have been regarded as the sole domain and responsibility of the government. This strategy of conservation and protection has alienated people who view parks and wildlife as inconvenient and perilous. This view of nature conservation as antagonistic to people is, however, changing. The Chitwan National Park (CNP) which covers an area of 932 square kilometers and is home to scores of flora and fauna is an excellent example of the potentialities offered to people through nature conservation efforts. CNP has been declared a World Heritage Site. Thus, thousands of tourists and nature lovers come to Chitwan. World-class jungle lodges have sprung up. There are 7 lodges and hotels inside CNP and 67 in Sauraha, a tourist-village on the outskirts of CNP. Thousands of people have benefited as owner-hoteliere, employees, home-hospitality providers, entertainers, producers and sellers of ethnic and other artifacts.

These people who criticize from the fringes should be involved in park management. They should own the park, shoulder responsibility and bear accountability. The concept of public-private partnerships in management offers a mutually beneficial solution to human development concerns as well as the critical need for conservation. To make management effective and accountable, parks should be given autonomy.

Of course, as most effort and attention have been concentrated on protection, the issues such as habitat improvement and development have been neglected. A lack of good quality grass in adequate quantities, shrinkages of grazing land and the smothering of trees, shrubs and spaces by *Mikania micrantha* are forcing rhinos and other animals out of the park into farms. Over the years, ponds have dried up and waterholes have degenerated, further aggravating the situation in the CNP. These facts demand that the protection of wildlife and conservation and habitat improvement need to be addressed with equal urgency, attention, and resources.

I am hopeful that this comprehensive study has been able to highlight the complex challenges confronting conservation. I also hope that it has clearly identified the myriad issues confronting future efforts at

conservation as well as gaps that need to be filled. The study has further proposed remedial measures to address these issues in view of the prevailing reality at all levels. It is hoped that this study will generate enough interest among all stakeholders and will generate public debate on facts, issues and gaps in the field of wildlife conservation, protection of habitats and the prevention of illegal trading in animal parts in Nepal.

I would like to thank Research Coordinator Dr. Ganesh Man Gurung, Advisor Dr. Tirtha Bahadur Shrestha, Lead Researcher Mr. Ukesh Raj Bhujju and his team members Dr. Ravi Sharma Aryal and Mr. Prakash Aryal, TIN Executive Committee Member Krishna Prasad Bhandari, President of Anti-corruption Campaign Bharatpur Mr. Bhim Bahadur Shrestha, Executive Director Mr. Ashish Thapa, Sr. Program Officer Ms. Rosy Adhikari, Sr. Administration Assistant Mr. D. N. Bhattarai.

On behalf of TIN, I express my gratitude to WWF Nepal, its Country Representative Mr. Anil Manandhar and Special Programs Coordinator Mr. Santosh Nepal, for their inputs and timeless efforts in making this study a success.

In the future too, TI Nepal will be very happy to work and co-operate with WWF Nepal in the field concerning the conservation of Nepali wildlife as well as the control and prevention of contraband trade in animal parts.

Damodar P. Gautam

President

Transparency International Nepal

Executive Summary

Background

The study undertaken by Transparency International Nepal (TIN) with the support of World Wildlife Fund (WWF) Nepal aims to uncover the facts and underlying issues related to the poaching of mega mammals in Nepal and the illegal trade in their parts. The methodology included review of policy and legal documents, snow balling techniques (nine consultative meetings), and field visits to 42 sites in 14 districts. Eighteen focus group discussions and 50 interactive interviews were conducted with 63 Community and Civil Society Members, 25 Conservationists, Scientists and Others in addition to 26 Government Administrators, six Intruders and Prisoners, and 39 Protected Area Managers.

The report contains five chapters: 1: Background, 2: Assessment of the Status of Poaching and Illegal Trade, 3: Review of the Institutional and Legal Framework and Gaps, 4: Investigation and Analysis of Poaching and Illegal Trade, and 5: Conclusions, Recommendations and Action Plan. The study focused on two major mega fauna species namely rhinoceros and tiger.

Assessment of the Status of Poaching and Illegal Trade

The rhinoceros and the tiger are the two mega-fauna species. Loss of habitat coupled with other human induced activities has posed grave threats to these species. Since the beginning of the national park system, the rhino population has increased from 120 and 147 in 1972 to 544 in 2000. This number has declined to 408 in 2008 in Chitwan. Poaching of rhinos for horn is the major cause of this decline. Altogether 130 breeding tigers have been recorded in the lowland protected areas and surrounding forests in 2005. Poaching and habitat destruction are the major cause of decline in their population.

Review of the Institutional and Legal Framework and Gaps

The major policies, strategies and plans pertinent to wildlife protection are National Conservation Strategy for Nepal, Nepal Environmental Policy and Action Plan, Revised Forestry Sector Policy, Nepal Biodiversity Strategy and Its Implementation Plan, and the Species Action Plans. The major Acts and Regulations pertinent to wildlife are the National Parks and Wildlife Conservation Act and its Regulations, Forest Act and its Regulations, the Buffer Zone Regulations, Conservation Area Management Regulations. The other relevant acts and regulations are in the domains of environment protection, import and export control, police, custom, treaties and transborder cooperation.

The major gaps in Nepal's legislative provisions include:

- Unidirectional policy making process,
- Non- specific mandates of government agencies,
- Information sharing is not institutionally built,
- Rewards and recognition are inadequate,
- Non-existence of anti-poaching squads outside protected areas,
- Rank and status conflicts among government officials.

Investigation and Analysis of Poaching and Illegal Trade

Poaching and illegal trade are not only related to conservation but also to economic, political and social sphere. Involvement of a wide range of people was found in poaching. It is not just the poor who are supposedly 'poaching' for livelihood, but elites are also involved. In some cases, middlemen have exploited locals' poor socio-economic conditions.

The complex issue of poaching and illegal trade is further complicated by procedures of punishment and penalties. According to conservationists, poaching will continue along with the demand for wildlife products.

Illegal traders are benefiting not only from the porosity of international borders, but also by the limited knowledge of personnel at custom and check posts. At the same time, illegal traders even threaten government personnel.

Patrolling and surveillance are inadequate to keep wildlife safe due to lack of resources for anti-poaching units. Army personnel feel that their current strength in park/reserve is not adequate. Security in the field is poor. Guard posts are inadequate in the field, and also in vulnerable areas.

Human-wildlife conflict is very high in and around protected areas. Local communities have reacted revengefully. However, several local youths have organized antipoaching groups to curb wildlife trade and poaching. The incentives of reward have increased local involvement in antipoaching activities.

NTNC has a supportive role in areas of research, monitoring and database maintenance. The National Forensic Science Laboratory (NAFOL) and the police have limited forensic capacity. The long-term goal is DNA testing, but the laboratory is not a priority of the government.

Although wildlife protection is not a priority for the police, on several occasions police cooperation has resulted in arrest of illegal traders and confiscation of wildlife parts.

The buffer zone program has been the most successful tool in raising awareness of local people around the park area. The program was considered to be an effective solution to wildlife crimes. However, in spite of public awareness programs and incentives to the local community, there are cases in which families are involved in poaching and illegal trade in wildlife. Benefit-sharing in buffer zone are not directly linked with antipoaching activities.

The factors hindering antipoaching include insufficient resources, political intervention, non-coordination among key players, poor tools of investigation, and irregularity of transborder meetings. Similarly, legal weaknesses include high degree of discretionary power exercised by the chief warden and district forest officer, and bureaucratic hurdles to release Rs50,000 as reward.

Conclusions

It is essential to explore methods of minimizing poaching whilst, at the same time, increasing biological growth of the species. The questions pertinent to sex ratio, habitat condition, mortality of breeders can be addressed in wildlife census and biological management.

Mega-species such as tiger and rhinoceros do not become extinct due to poaching alone. However, poaching will not be stopped completely as long as there is demand for wildlife products.

Of the 80 rhinoceros horns that were received at the National Forensic Science Laboratory at Khumaltar, Lalitpur for tests, only three turned out to be genuine. On average, it takes one to two hours to identify rhinoceros horn using traditional confirmatory tests.

The level of wildlife knowledge among managers and experts needs to be updated. The general courses in universities do not cover legal formalities of handling wildlife cases.

Interest shown by the local community members in anti-poaching activities is commendable. Awareness activities and the involvement of local informants also contribute greatly to initiatives against poaching and illegal trade. Control of poaching and illegal trade is possible through strengthening capacity of park personnel.

There are several barriers in the enforcement and implementation of laws on wildlife protection.

The roles of the army in PAs should be clearly defined with revisions to existing acts as well as the formulation of new acts and regulations.

System and Ways of Poaching and Illegal Trade

Rhinoceros were poached in the Terai, even before conservation started. Tigers were targeted by poachers for their hides in the 1970s. Tiger bone became a popular trade item.

Prior to the political changes of 1990, all confiscated wild animals and parts were sent to the Royal Palace. Since then, these items have been stored in the Tikauli center of the armed forest guards.

It is clear that networks of poaching the illegal trade are strong and efficient. Little is known about networks at the upper level. Key actors in poaching and illegal trade in wildlife and their parts range from local groups/individuals, right up to the national– where products are sold in the international market. Poaching susceptibility is based on easy availability of wildlife and/ or security gaps due to remoteness or distant security posts.

Protected area personnel are threatened by poachers/smugglers. Blackmailing is another type of threat used against lawyers, civil society and forest officers.

Wildlife crime involves a complex network. There is no point in blaming local communities for such crimes.

Effectiveness of Policies and Institutions against Poaching and Illegal Trade

In spite of some favorable aspects of legal implementation, there are issues yet to be addressed. Some of them are:

- CITES bill is yet to be approved,
- Strong political influence to protect poachers/illegal traders exists,
- Poor coordination exists among concerned agencies,
- Wildlife is not legally defined as forest products,
- Rewards are not awarded due to bureaucratic hurdles,

Although the existing system of investigation and intelligence has its strengths, there are issues that need to be addressed, including:

- Poor documentation of wildlife,
- Park scouts are not equipped adequately,
- Army patrolling is limited to protected areas,
- Nearly 60% of poachers escape,
- Quasi-judicial system of park is not rational,
- Key players: army, police and civil authorities occasionally clash over personal egos,
- NAFOL has limited facilities and resources,
- Confiscated wildlife items are not properly stored at the Tikauli center,
- Most custom, police and army personnel are poorly informed on wildlife issues,
- The community based APUs have felt a gap in terms of capacity building and finance,
- DNPWC, DoF and Custom have divergent responsibilities towards wildlife,
- Anti-poaching squads have not been formed in urban areas,
- Formal coordination mechanism is not in place,

Recommendations

Allocation of resources

Revenues from tourism and other activities in and around parks should be used to the satisfaction of all stakeholders in a transparent and fair manner.

Adjudication of cases

Cases related to poaching and illegal trade in wildlife and their parts are decided, in the first place, by park wardens and DFO's, who, should be properly trained in the nuances of laws and intricacies of adjudication.

Breaking Nexus

Strong laws and strict enforcement are needed. Further, to wean people at the bottom away from heinous nexus of poaching and illegal trade, toward alternatives, necessitates the creation of alternative opportunities.

Non-governmental Initiatives

In this connection, buffer zone policies need revisit with new initiatives to realize their full potential. The buffer zone institutions should be backed with better technical inputs, more authority and autonomy.

Necessity for Sensitization at Centre

A high-level committee under the chairmanship of the Prime Minister should be formed to look into all the problems and issues related to parks and poachers and the committee should include secretaries, ministry of defense, finance, foreign affairs, forest and home. The committee should also be authorized to invite other secretaries and experts as required.

The quasi-judicial system should be strengthened by increasing the number of members. Individuals involved in plotting poaching/illegal trade should also be treated like poachers. The number of field staff should be made adequate.

Actions Suggested

At the community, the government agencies should launch campaigns against poaching and illegal trade. The CBOs organized under the aegis of the buffer zone system can be mobilized for this action.

At the national level, the government should form a high level coordination committee against poaching and illegal trade, and organize capacity building programs for key partners. The committee should be represented by the key players in the government and nongovernment sectors. The capacity building programs should cover: antipoaching operations, protection, investigation, intelligence, quasi-judicial system, wildlife biology, database and forensic.

At the regional and global level, the government actions should include regional strategic plan preparation, transboundary cooperation, and CITES implementation.

The role of conservation partners: NTNC, WWF, IUCN and ICIMOD are mainly to complement government efforts to protect wildlife and control illegal trade in wildlife.

1. Background

The increased threat of poaching has been one of the major challenges in conserving several endangered species including the rhinoceros, tiger and leopard in their natural habitat. Lately, an unprecedented rise in poaching of large mammals, trade in their parts and destruction of their habitat has increased. This has raised concerns about their threat of extinction.

Over the last few decades, collective efforts by government and conservation organizations like WWF have contributed to an increase in population of these species. Despite these efforts, numbers of rhinoceros and tigers in the wild have been decreasing. Tiger numbers have also decreased in neighboring India. These trends challenge conservation efforts. It is believed that a network of traders, smugglers and supporters (locals, middlemen, office staff, politicians and international contacts) form an illicit network that facilitates poaching. Weak institutional structures and poor enforcement capacities allow these networks to continue and prosper.

It is felt that the weaknesses and challenges to poaching and illegal wildlife trade in Nepal need immediate public discussion and attention. It is important to bring these issues into the public domain so that national activities can be geared toward conservation efforts and control of crimes against wildlife. Therefore, this study aims to explore and reveal facts about poaching and illegal trade in wild animals and their parts. The hope is to stimulate necessary action and facilitate effective policies for prompt implementation.

1.1 Objectives

The primary objective of this study is to uncover facts and issues on the poaching of mega mammals and the illegal trade in their parts. The associated objectives (AO) are:

- AO 1. Assess the status of poaching and illegal trade in wildlife and their parts,
- AO 2. Review the existing institutional framework for the management and protection of wildlife and assess the gaps therein,
- AO 3. Investigate and analyze the linkages of poaching with the trade in animals and their parts and assess the special focus around the protected areas,
- AO 4. Analyze the roles and linkage of different actors involved in poaching,
- AO 5. Recommend a set of actions for the conservation of wild animals in their natural habitat.

1.2 Methodology

Review of the Policy and Legal documents: A review of existing policies and laws on management and protection of wildlife was carried out to assess the strengths and weaknesses.

Snow balling sampling technique (**Annex 1**) was used to identify experts and Government Officials, Park personnel, Local communities as well as Civil Society Organizations and stakeholders for consultative meetings (CM), focus group discussions (FGD) and interactive interviews (II).

The locations of the field CMs, FGDs and IIs were identified in consultation with respective park authorities, TIN field staff, and the officials of the field based partner organizations of TIN.

Checklists and questions were prepared to conduct consultative meetings, focus group discussions and interactive interviews (**Annex 2**).

Consultation meetings with park personnel, Local communities and Civil Society members: Five protected areas representing Terai (Bardia, Chitwan and Shuklaphanta), Hill (Shivapuri), and Mountain (Langtang) were visited for field consultations. During the visits, 22 park personnel (officials of the Department of National Parks and Wildlife Conservation, national parks and wildlife reserves, and Nepal Army) were contacted for consultative meetings on legal, institutional and procedural issues related to protection, poaching and trade. Thirty-five persons representing various community organizations and civil society groups were consulted in meetings. Similarly, five experts were consulted in meetings (**Annex 3**).

Focus Group Discussions: these were held to validate feedbacks related to wildlife protection, poaching and trade from over 18 representatives of the local communities, buffer zone institutions, civil societies, tourism entrepreneurs, conservation organizations, government officials and protected area personnel.

FGDs were organized among the nine protected area managers, seven government administrators, six intruders and prison-inmates, and three experts (**Annex 3**).

Interview with Experts: A series of interactive interviews with 19 Government Administrators (officials from concerned government agencies, Ministry of Forests and Soil Conservation, Department of Forests, Nepal Police, District Administration Offices, Department of Customs), 13 experts (conservationists, scientists and journalists), eight Protected Area managers, and two community representatives were conducted to determine their views on existing policies, practices, trends of poaching and related trade, and institutional mechanisms on protection of wildlife and their habitat (**Annex 3**).

1.3 Scope and Limitations

Focusing on the terms of references, the study was limited to research on the given topics. The research was undertaken within the parameters and methods of Transparency International – Nepal, and was not a criminal investigation on poaching and illegal trade in wildlife and their parts. However, information uncovered was analyzed and presented as applicable.

2. Assessment of the Status of Poaching and Illegal Trade

2.1 Mega species

The rhinoceros and the tiger are the two mega-fauna species. Brief notes on the species are given below:

Loss of habitat coupled with other human induced activities have created grave threats to tigers, rhinoceros and elephants in the country (DNPWC 2003). Asia's mega-fauna are best represented by the tiger, elephant and rhinoceros. Unfortunately, all three have succumbed to illicit trade and large scale habitat destruction. Tigers and rhinos are poached extensively in Nepal's protected areas (Yonzon 2006). Wildlife conservation in Nepal was initiated with a major focus on endangered species protection. Protected areas were created to conserve endangered species such as rhinos and tigers (DNPWC/MoFSC/GoN 2006).

2.1.1 Rhinoceros

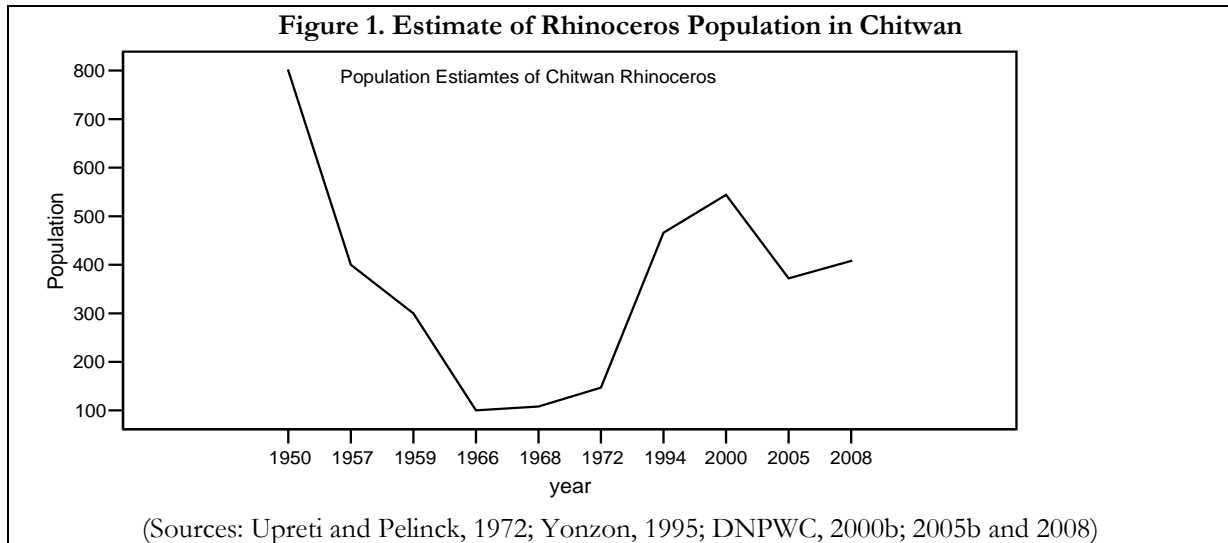
Poaching of wild animals mainly affects large mammals including rhinoceros. Once abundant in Asia and Africa, rhinoceros are now battling for their survival due to heavy poaching and habitat destruction (DNPWC/MoFSC/GoN 2006).

Poaching of rhinoceros has become a serious problem at the park. Hence all the protection efforts at the park are geared towards preventing the poaching of rhinoceros (UNESCO & IUCN 2005 b). Rhino poaching has fluctuated over time, with a surge in incidences in 2002 (DNPWC/MoFSC/GoN 2006).

Serious efforts for the conservation of one- horned rhinoceros began in the country in the early 1970s when there were less than 100 individuals (DNPWC 2004). The Rhino Count in Nepal started in 1994 by the DNPWC (DNPWC 2005 b). Rhino Count, 1994, estimated a population size of 466 individuals, with an increase to 544 individuals in Rhino Count-2000 in CNP (DNPWC/MoFSC/GoN 2006). It was found that the growth in rhino numbers in CNP since 1994 is 104 - an annual increase of 3.88% (DNPWC 2000 b). The Nepal Rhino Count 2000 recorded a total of 612 rhinoceros with an annual growth rate of 3.88% (DNPWC 2002). Rhino Count 2005 recorded a total of 372 rhinoceros in CNP and its periphery (DNPWC 2005 b). The Rhino Count 2008 recorded a total of 408 rhinoceros in and around Chitwan National Park and 22 rhinoceros in Bardia National Park (DNPWC 2008) (**Table 1** and **Figure 1**).

Year	Numbers	Authors
1950	800	Willian, 1965
1957	400	Stracey, 1957
1959	300	Gee, 1959
1966	100	Spillet and Tamang, 1967
1968	81-108	Caughley, 1968
1972	120-147	Pelinck and Upreti, 1972
1975	270-310	Laurie, 1978

Year	Numbers	Authors
1988	358-378	Dinnerstein, 2003
1994	446-466	Yonzon, 1994
2000	544	DNPWC, 2000
2005	372	DNPWC, 2005
2008	408	DNPWC, 2008

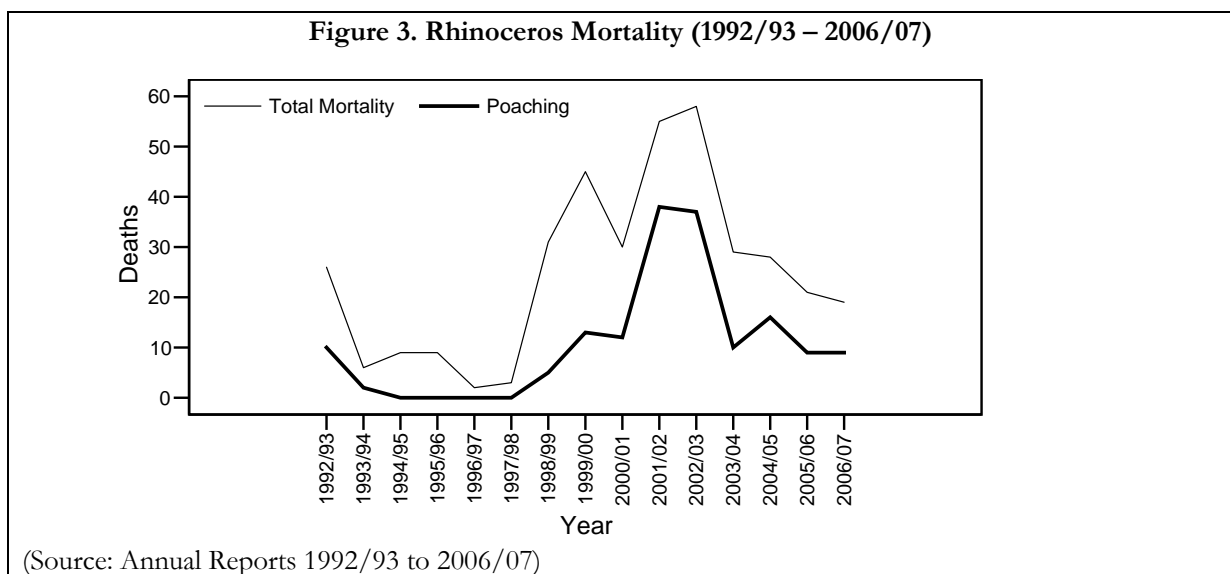
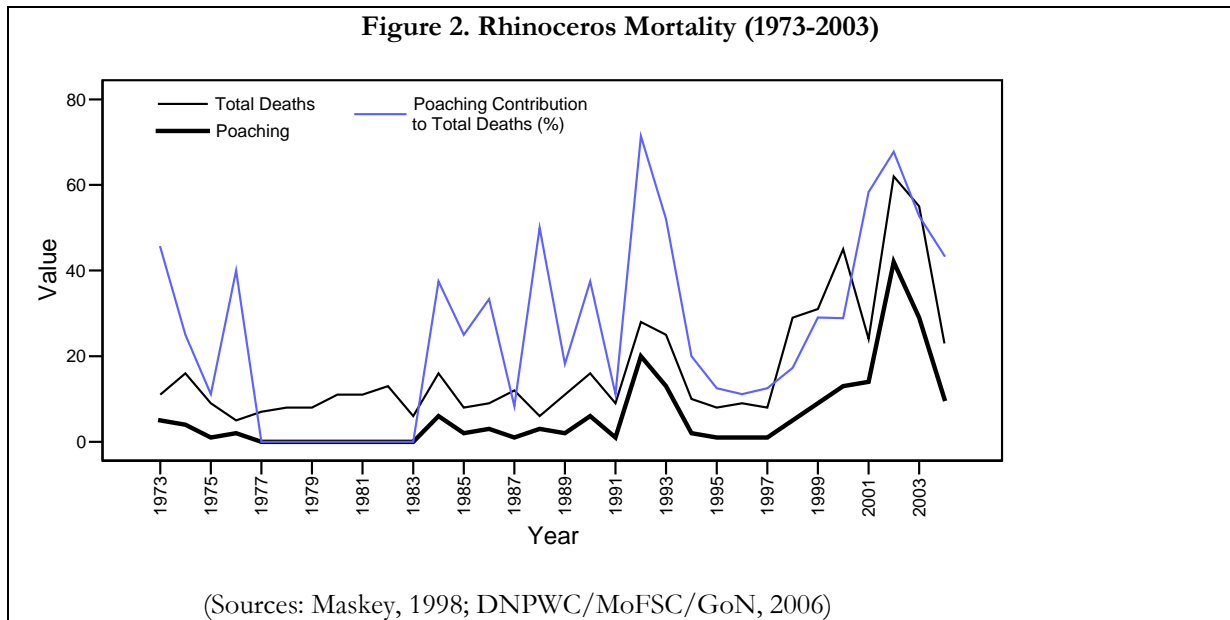


The Western Terai (BNP) is one of the priority sites for Greater One-horned rhinoceros selected for the South Asia Bioregion by WWF's Asian Rhino and Elephant Workshop held in Ho Chin Minh city, Vietnam on 1-6 December, 1998 (DNPWC 2000).

Years	Male	Female	Total	Locations
1986	8	5	13	Chitwan to Bardia (Karnali Flood plain)
1991	8	17	25	Chitwan to Bardia (Babai valley)
1999	2	0	2	Chitwan to Bardia (Babai valley)
1999	2	0	2	Sarlahi to Bardia (Babai valley)
2000	8	8	16	Chitwan to Bardia (Babai valley)
2000	1	3	4	Chitwan to Shuklaphanta
2001	2	3	5	Chitwan to Bardia (Babai valley)
2002	5	5	10	Chitwan to Bardia (Babai valley)
2003	3	7	10	Chitwan to Bardia (Babai valley)
Total	39	48	87	

Source: DNPWC/MoFSC/GoN 2006

A total of 83 rhinoceroses were translocated to Bardia between 1986 and 2003 (**Table 2**). In the Babai valley, 70 rhinoceroses were translocated, no sightings were made in the five blocks of the Babai flood plain areas (DNPWC 2007). However, 22 rhinoceroses were recorded in the Karnali floodplain during the Rhino Count 2008 (DNPWC 2008).



2.1.2 Tiger

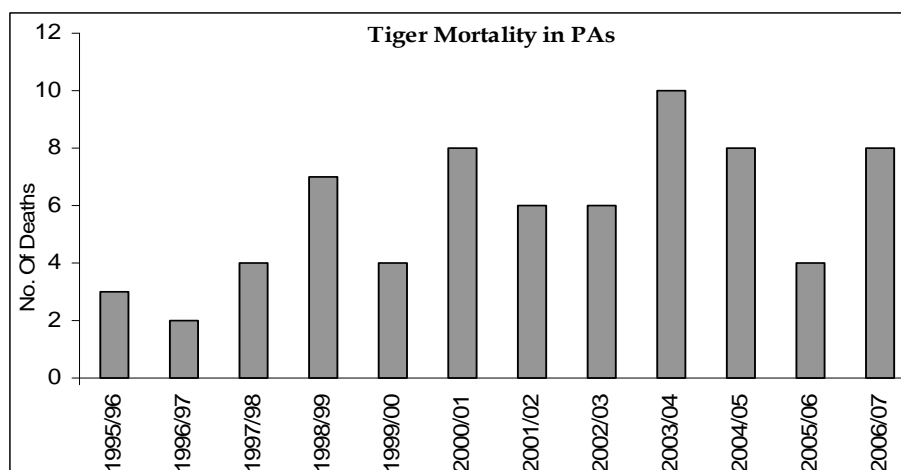
The tiger is a mega-species and represents the apex of the eco-system. Reports released by some of the world’s leading tiger scientists, indicates that the tiger currently occupies 40% less habitat than they were thought to occupy a decade ago. Furthermore, tigers now occupy just 7% of their historic range (DNPWC 2007). The warning signs of the tiger’s decline are ominous. Within the past decade alone, the estimated area known to be occupied by tigers has declined by 41 % (Dinerstein et al. 2007). An increased demand for endangered tiger parts exists throughout the world. In Asia, tigers are suffering not only from significant loss of habitat but also from declines in prey species. In the early 1990s, it became evident that medicinal trade in tiger bone threatens to drive the already endangered tiger to extinction in the wild. Nearly every part of a tiger has a high market value (DNPWC/MoFSC/GoN 2007). Market demand for tiger products, left largely unchecked because of law enforcement deficiencies in tiger range and consumer taste, could easily wipe out tigers in the wild (IFAW 2000).

Threats to tigers in the wild are growing more rapidly than the rate at which scientific information on tigers is being collected, forcing conservation decisions to be made in the face of uncertainty. Despite being

targeted as a conservation species for several decades, the tiger (*Panthera tigris*) ever increasing threats (Ranganathana et al. 2008). Habitat degradation and prey poaching are widespread and have reduced the prey base needed to support tigers. (Smith et al. 1998). Illegal hunting poses a dual threat to large carnivores through direct removal of individuals and by prey depletion. Poaching is believed to be among the primary factors resulting in the current decline (Datta et al. 2008).

Historically, tigers were distributed consistently across lowland forests. At present, these isolated populations (Chitwan National Park, Bardia National Park and Shuklaphanta Wildlife Reserve) exist. (DNPWC/MoFSC/GoN 2007). The tiger census 1995-1996 estimated the tiger population in Chitwan, Parsa, Bardia and Suklaphanta to be 48-49, 30-32 and 15-16 breeding animals respectively (DNPWC 2000). Altogether, 130 breeding tigers have been recorded in the lowland protected areas and surrounding forests (DNPWC 2005). In Nepal, tiger conservation combines financial commitments with action and oversight by the governmental and nongovernmental sectors (Dinerstein et al. 2007).

Figure 4. Tiger Mortality in Protected Areas



(Sources: DNPWC annual reports 1995/96 to 2006/07)

2.2 Poaching

Poaching of protected wildlife species began long before the present national parks and wildlife reserves were gazette notified. Poaching records show that prime targets for poachers are the one-horned rhinoceros followed by the spotted deer, wild boar and then the tiger. While the rhinoceros and the tigers are killed for the value of their horn and bones, deer and boar provide meat to local people (Chungyalpa 1998). Reports of illegal hunting from parts of Nepal are common. The monsoon period is well suited for poachers due to natural obstacles like swollen rivers that help them make an easier getaway and prevents anti-poaching units from following immediately (Chungyalpa 1998). Layers of networks play their roles in this lucrative illicit business. Players range from those luring local shooters to middleman and international smugglers to illegal sellers and finally to consumers (DNPWC/MoFSC/GoN 2007).

The only reliable data existing on poaching of a significant species is for the Asian one-horned rhino. This is due to its high profile after decades of successful conservation efforts and to the fact that data for illegal trade seizures of other species are scanty (Murphy et al. 2005; Oli 2006). Records show increases in rhino poaching in periods of political instability. The deterioration in law and order situation in recent times has led to increased incidents of rhino poaching (DNPWC 2004), particularly after the state of emergency was declared in November 2001. Rhino Count 2005 revealed a loss of 157 rhinos from Chitwan National Park between the years 2000 and 2005 of which 94 were confirmed to have been killed by poachers (Shrestha & Joshi 2007). It was a decline by 32% over the five years (USAID 2006). The insurgency has taken its toll in Bardia and Shukla Phanta protected areas in western Nepal, affecting the rhino populations there too (Phuyal 2006). Combining data from various sources, poaching appears endemic (Yonzon 2004). During

2003 the officials seized 32 tiger skins, 579 leopard skins, and 660 otter skins (Asian Development Bank & ICIMOD 2006; Oli 2006).

Wildlife poaching has remained a problem in most of the protected areas of the country. With the price increase of wildlife products from the endangered species list, such as tigers and rhinoceros, Nepal is facing an increased threat of poaching and illegal trade (DNPWC 2001). In spite of a number of measures taken to prevent poaching of wildlife, frequent reports are published of poachers caught in possession of wildlife parts. The main species poached in the Terai are the Royal Bengal tiger and the one-horned rhinoceros, and musk deer in the high mountain (HMGN/MFSC 2002). Poaching of endangered wildlife species and illegal trade in their products poses serious challenges to PA managers and conservationists. Very often middlemen lure local subsistence residents into pulling the trigger. Poaching methods utilized by the poachers differ according to location (DNPWC 2004). Successful poaching depends on access to local knowledge. Local people are likely to part with their knowledge, especially for large cash incentives, especially in situations where they see little value in protecting wildlife (Haynes 1998). The average poacher is a local villager who earns many times more than a year's income from the yields from one poach. It is this combination of poverty, lack of education and the international market demands that precipitates poaching in wildlife sanctuaries. Roads enable easier access, thus encouraging settlements. Previously inaccessible areas become vulnerable to hunting and poaching (CEPF 2005). At present, any policy review is hampered by a lack of relevant data and an unwillingness to discuss project-based issues associated with corruption (Smith et al. 2003).

Poaching for high value products for the international market is considered a great threat and a higher priority for action (HMGN/MFSC 2002). Often, poaching events are conveniently sequenced around periods of political upheaval (Adhikari 2002). The presence of army in the PAs has served as a strong psychological deterrent to poachers and illegal dealers in wildlife species and their products (DNPWC 2002). The deterioration of law and order in the country, as a result of armed conflict, gave rise to illegal activities such as wildlife poaching (WWF 2003) inside national parks because of reduced patrolling as security personnel were redeployed to conflict areas (Asian Development Bank 2004). Poaching of wildlife has increased substantially (Asian Development Bank & ICIMOD 2006) and an escalation of poaching activities inside protected areas has been attributed to lax security and inefficiency of antipoaching units (APUs) since patrolling by both army and civilian staff has been reduced in temporal and spatial scales within protected areas (Baral & Heinen 2006) after the removal of soldiers from guard posts within the protected areas and the destruction of physical structures of the posts, combined with threats of ambush and booby traps making travel difficult in and around protected areas (WWF 2006). This has been the case especially since 2001, when the Army, which has been used to patrol national parks and wildlife reserves since the 1970s, was mobilized to address the Maoist insurgency (Heinen & Shrestha 2006) so that pocket areas with abandoned guard posts within PAs, proliferated with poaching and illicit logging activities (Yonzon 2002).

2.3 Illegal trade

International trade in wildlife is a principal cause of biodiversity loss, involving hundreds of millions of plants and animals each year. Yet, wildlife trade records are notoriously unreliable (Blundell & Mascia 2005). Accurate wildlife trade data on bio-security is essential in managing sustainable trade and border issues because the data contributes to issues such as intelligence, enforcement, monitoring, and decision making (Gerson et al. 2008). Illegal trade is directly correlated with demographic factors, potentials for profit and lack of adequate resources for law enforcement (HMGN/MFSC 2002).

High returns with low risks of detection and punishment has made illegal wildlife trade attractive to criminals. Although some offenders are linked directly or indirectly with legitimate trade networks, there is increasing evidence that more organized crime elements are engaging in lucrative areas of illegal wildlife trade. It is impossible to quantify the value of the global illegal trade, but we can say with certainty that its costs are high – both in terms of human and environmental costs. Although it is extremely difficult to estimate the value of this illicit trade, what remains beyond doubt are the consequences for the conservation of endangered species and, ultimately, for biodiversity. What is clear, however, is that the financial cost of the global illegal wildlife trade runs into billions of dollars and is probably second only to the drugs trade in terms of the potential levels of profit on offer (Cook et al. 2002). UNEP estimated the

annual revenue from the international illegal wildlife trade to be US\$5–8 billion (UNEP 2007) and it is estimated that global wildlife trade is around \$ 25 billion annually (Shakya 2004).

In Nepal, trade in wildlife parts and live animals is geared mostly toward the international market rather than the local market. Nepal is not regarded as a consumer of wildlife; however, it is used as a transit point for the international wildlife trade (Shakya 2004). Nepalese territory acts as a “safe passage” or “gateway” to smuggle contraband to and from China’s Tibetan Autonomous Region in the north, and India in the east, west and south (Aryal 2004). Commodities include: satoosh, fur, musk pods, bear bile, tiger skin and bones, ivory, rhino horn, leopard parts and live animals (turtles, birds). Recent seizures of wildlife parts also indicate that Nepalese territory is increasingly used to transport these goods to the end users in Tibet/China, East Asia and even to the west. Kathmandu is a transit point for the underground trade networks in the region. The magnitude of seizures across the country including Kathmandu, indicates that poaching could be rife in the country (DNPWC/MoFSC/GoN 2007). Wildlife product seizures made, to date have been accidental or fortuitous, which implies that there is significantly more illegal trade in wildlife products than is brought to the attention of the concerned officials (Aryal 2004). There are well connected illegal trade networks linking Nepal with both China and India.

In October 2003, 32 tiger skins, 579 leopard skins and 600 otter skins were seized near the Tibetan border. In March 2004, seven tiger skins, six jungle cat skins and 165 pieces of tiger bones were seized in Nepalgunj. In July 2004, one tiger skull, two tiger skins, eight leopard skins and 5 sacks of tiger bones were seized in Kathmandu (GTF 2004). Traders now use land-routes as borders are porous and customs lax. Nepal has 165 customs offices spread throughout its southern border with India. From Nepal, the trade routes to Tibet are Dharchula, Manang, Taklakot, Kyrong, Taplejung and Tatopani. As there are many routes to transport goods into Tibet, traders use porters and backpack animals to avoid detection. However, it is equally easy to transport consignment by trucks. For traditional medicine, and ornaments, China has found India along with other south Asian countries as its source for tiger and rhino body parts. In this covert trade, Nepal suffers more by being both transit and source point where Tibetans, Nepali and Indians traders and poachers all operate (Yonzon 2006).

The majority of poachers come from local ethnic communities. The average poacher is a local villager who earns many times more than a year’s income from the yield of one poaching. He has little or no understanding of the long term implications of decreases in wildlife populations. The solution to the problems of poverty that he and his family are facing exists right across the fence; inside a wildlife reserve or NP. It is this combination of poverty, lack of education and demand of the international market that leads to the problem of poaching in wildlife sanctuaries. Often, poaching is perceived as an isolated incident. In actuality, there is an intricate relationship involving middlemen, wildlife product dealers, traders and consumers (Chungyalpa 1998). To ensure that illegal consignments are not hijacked by rival groups, Indian poachers/traders use Nepali brokers as mediators between traders and themselves (WCN 2006). Today, Indian poachers prosecuted in India use Nepal as a safe haven from where they can continue with their trade. Illegal wildlife trade and its nexus are closely intertwined and associated with the underworld (WCN 2007 c). Wildlife is also trafficked for sale alongside drugs (Cook et al. 2002). It is a common knowledge that organized criminal networks are attracted to wildlife trade because it offers high profit with little risk of detection and prosecution. A poacher in India is paid US\$1,500 for one tiger skin, whilst a trader in China may offer the same skin for as much as US\$ 16,000-a profit margin of over 900 percent. This profit incentive greatly outweighs the potential financial penalties upon prosecution. Fines in India can be as little as US\$440 ,even the maximum fine of US\$1,420 in Nepal is less than the value of a single skin (EIA & WPSI 2006). Due to the geopolitical realities of Nepal, wildlife trade can and is undermining biodiversity conservation (Yonzon 2006).

The routes used by wildlife smugglers are often complex, making it difficult for the authorities to track and intercept shipments. therefore involves serious offences, many committed by serious offenders (Cook et al. 2002). Today, traders are better equipped and their field operations are well organized (Yonzon 2006). Putting an end to this trade will require more effort than the current practice of confiscating skins en route to, or in the market place (EIA & WPSI 2006). Considering the network of poachers and smugglers, it has been suggested that involvement of police would be indispensable. However police organization have been concerned more with social problems rather than with wildlife conservation (DNPWC/MoFSC/GoN

2007). Most illegal wildlife trade occurs outside protected areas and beyond the jurisdiction of wildlife authorities, calling for coordination and cooperation among several departments and line agencies of the government. Normally, the concerned district forest offices look in to wildlife offences in their district (DNPWC 2005). In the Mid-hills, DFO staff time is spent either on community forestry or in administration, and not enough time is given to biodiversity conservation (HMGN/MFSC 2002).

Wildlife goods from India are transported into Nepal via illegal border crossings with the cooperation of local traders and middle men (WCN 2007d). There is a lack of information on the volume of the trade, its *modus operandi*, commodities involved, trade routes and the lack of training for law enforcement personnel (Aryal 2004). The judicial system has virtually failed to deter poachers and smugglers (Yonzon 2006). Poachers and their buyers are seldom brought to justice and convicted, and when they are, their sentences are unlikely to deter future poaching and illegal trade (Dinerstein et al. 2007). There is little likelihood of wildlife parts being exported across the boarder without the involvement of government authorities (Shakya 2004). There are many cases where offences have been committed by well-known experts in the field (Cook et al. 2002).

According to the 2001 Management Plan of the Chitwan National Park, the main poaching prone areas were:

Animal species	Areas
Rhinoceros	Liglige, Khagendramalli, Amrite, Bagmara, Langkalaen, Jutpani, Bandarjholā island, Devital to Ledaghat, Sehri to Bagwan, Bankatta
Tigers	Madi belts, Sunachuri, Khagendramalli, Sauraha to Jarneli, Barandavar, Bandarjholā island, Bagawan area and Lendaghat to Tribeni
Bears	Churia hills, Bagawan, Barandavar and Madi
Deer and Wild boar	Bagai, Bagawan

(Source: UNESCO and IUCN, 2005 b)

In Parsa Wildlife Reserve, the natural forests of 949 ha between Bertha Khola and Highway near Adhavar Headquarters support good populations of different wildlife species due to the presence of water sources. The threat of poaching is very high in this area due to easy accessibility (DNPWC/PCP. 2006).

In the Shuklaphanta Wildlife Reserve, crop-related damage from wild elephants and rhinos in the buffer zone particularly in Dodhara and Chandani. Within the Indian territories, nearby settlers from Lagga Bagga, Kurtyia Cober, Tatar Gunj, Gabia Colony and No.7 Basti, are notorious for their poaching activities in the Reserve. The reserve was nominated as a site for MIKE (Monitoring of Illegally Killed Elephants) in Nepal, by CITES (DNPWC/MFSC. 2006).

3. Review of the Institutional and Legal Framework and Gaps

3.1 Review

To protect mega species, their habitat as well as the control of illegal trade in their parts, the Government of Nepal has adopted and implemented various policies, acts and rules through the establishment of nation-wide structures. It is the responsibility of the Government to fulfill her commitment to the international community, constitution and people. The Government of Nepal has demonstrated international commitment to controlling wildlife trade by signing CITES and preparing CITES bill for implementation. However, this bill is yet to be enacted.

The acts, regulations, policies and strategies that control poaching of wildlife and illegal trade in wildlife parts are reviewed in this section. The following selected acts and regulations pertinent to forests and wildlife are reviewed from the perspectives of poaching and illegal trade:

3.1.1 Policies, Strategies and Plans

National Conservation Strategy for Nepal, 1988

Formulated in 1988, the guiding principles of 1988 National Conservation Strategy for Nepal (NCS) were: (a) reflection of the social and cultural values and the economic needs of Nepalese people, (b) wise use,

protection, preservation and restoration as the basic elements of conservation, and (c) making full use of existing institutions, and structures in the public as well as private sector by avoiding wherever possible the introduction of new governmental organizations and agencies (HMGN/IUCN, 1988).

The objectives of the NCS, among other things, related to biodiversity for Nepal are to:

- ensure the sustainable use of Nepal's land and renewable resources;
- preserve biological diversity in order to maintain and improve the variety of yields and the quality of crops and livestock and to maintain the variety of wild species (both plant and animal); and
- maintain essential ecological and life support systems.

The NCS is more concerned with the illegal trade in valuable tree species, such as Khair and *Sal*, medicinal plants, orchids and, to a lesser degree of wildlife products (Aryal, 2004). It is also stipulated in the NCS that much of this trade is done through large-scale commercial operations possible due to inadequate legislations and ineffective government surveillance procedures, particularly in remote areas. The NCS has explicitly recommended that Nepal, as a signatory of CITES, should adopt the legislation and administrative procedures necessary to implement CITES.

Nepal Environmental Policy and Action Plan, 1993

The NEPAP does not deal with CITES in detail. It simply mentions that some species known to be endangered due to international trade have been listed in the CITES Appendices. However, it does not specify those species. It does recommend the enactment and enforcement of necessary legal and regulatory measures to implement major international treaties and conventions, as well as to control illegal wildlife trade within the country (Belbase and Bhattarai 1993). The NEPAP recognizes that effective regulatory measures are required to curb illegal trade in wildlife and emphasizes that legislation should be enacted and enforced through international legal instruments. Ironically, the Environmental Protection Council has done nothing significant to implement NEPAP since its endorsement and publication in 1993.

Revised Forestry Sector Policy, 2000

The 2000 Revised Forest Policy reviews and updates the objectives of MFSC. High priority is given to biodiversity conservation while ensuring both sustainable livelihoods for people and a landscape planning approach to manage biodiversity on an ecological basis. Due emphasis has been given to sustainable utilization of forest resources and community participation in decision making as well as equitable sharing of benefits. The principle of holistic land use will be instrumentalized through blending forestry management with biodiversity conservation and community development activities.

Nepal Biodiversity Strategy (NBS) and Its Implementation Plan, 2002

The Nepal Biodiversity Strategy (NBS) envisages prosperity for Nepalese people through biodiversity conservation and sustainable development in the country. It considers biological diversity and its resources as the fundamental elements of economic prosperity as they are the sources of food, wood for fuel, timber, shelter, fiber, and foreign exchange earning through tourism. Other important benefits of biodiversity include maintenance of water cycles, regulation of climate, protection of soil, management of watershed areas, storage and recycling of nutrients and absorption of pollutants. Furthermore, biodiversity provides intangible benefits through aesthetic values, inspires cultural and religious values, and increases prestige for the country.

NBS highlights the close linkage of biological diversity of the country to the livelihoods and economic development of most of the people, and relates biodiversity to agricultural productivity and sustainability, human health and nutrition, indigenous knowledge, gender equality, building materials, water resources, and the aesthetic and cultural well-being of the society.

The 2002 Nepal Biodiversity Strategy analyzes the policy & legislation, major achievements, lessons learned, major constraints and gaps in the five sectors namely protected areas, forests, agro-biodiversity, rangelands, wetlands and mountains. It has outlined 17 strategies under the cross-sectoral category, and 27 in the five sectors as mentioned above. Participatory management and conservation of wildlife is the crux of this strategy.

The NBS Implementation Plan (2006-2010) has outlined 13 priority projects including Species Conservation and Habitat Management in the Protected Areas. It covers conservation of major species such as tiger, elephant, rhino, wild water buffalo, snow leopard, dolphin, swamp deer, black buck and also covers anti-poaching operations.

Species Action Plans

The government has prepared and revised action plans for the tiger, snow leopard, rhinoceros and elephant. The plans address the issues of poaching and illegal trade along with research, habitat management, and public participation.

A synopsis of the action plans of the two mega species, tiger and rhinoceros, are:

Revised Tiger Conservation Action Plan: Its goal is to preserve, recognize, restore, and increase the effective land base that supports tigers in Nepal, in order to maintain a viable tiger population. Its five main objectives are:

1. Establish sound scientific information base for management of tiger and prey.
2. Manage tiger habitats at the landscape level.
3. Minimize tiger human conflicts.
4. Protect the tigers and their prey base from poaching, retaliatory killing and illegal trade.
5. Enhance transboundary cooperation for combating illegal trade in wildlife, maintaining ecological integrity in the tiger landscapes, and promoting tiger tourism.

Greater One-horned Rhinoceros Conservation Action Plan (2006-2011): Its purpose is to conserve the species *Rhinoceros unicornis* in perpetuity. The Government of Nepal has embraced conservation initiatives in or beyond the protected areas in favor of maintaining viable populations of rhinoceros (DNPWC/MoFSC/GoN. 2006).

The Action Plan has formulated nine objectives as follows:

1. Continue study on rhinoceros biology and their habitat, and establish database with monitoring System.
2. Habitat expansion through rehabilitation/restoration of identified priority rhino habitats.
3. Reintroduce rhinos to create at least viable population.
4. Improve rhino-human relationship through buffer zone development and conservation education.
5. Strengthen anti-poaching capability.
6. Build institutional capacity.
7. Limit transfer of Rhinos for *ex-situ* conservation from wild populations.
8. Strengthen national, trans-boundary, regional and international Collaboration.
9. Ensure sustainable funding to implement the rhino conservation action plan.

3.1.2 Acts and Regulations Pertinent to Wildlife

National Parks and Wildlife Conservation Act (NPWCA), 1973

The objective of NPWCA is to maintain good conduct and comfort of the people to provisions of national park, protection of wildlife and habitat, controlling poaching and conservation, promotion as well as the development, proper management and utilization of sites with special natural aesthetic qualities.

NPWCA under Section 2 provides definitions of various terms used in the Act. For instance, "National Park" means an area set aside for conservation, management and utilization of animals, birds, vegetation or landscape as well as their natural environment. "Strict Nature Reserve" means an area of ecological significance or other significance set aside for the purpose of scientific study. Similarly, "Wildlife Reserve" means an area set aside for conservation and management of animal and bird resources and their habitats. "Hunting Reserve" means an area set aside for the management of animal and bird resources for the purpose of hunting. "Wildlife" stands for all species of mammals, aves, reptiles, fish, amphibians, insects and eggs (excluding domesticated species) "Poaching" is defined as those practices and activities that hamper, disturb, kill, extract wildlife organs and injure wildlife including destruction to nests and eggs. This covers all species, including Mega Species.

Schedule 1 of the NPWCA has provided a list of wildlife, including mega species and birds that are regarded as protected animals. Hunting is therefore strictly prohibited. Exceptions include man-eating tigers, rogue wild elephant and animals suffering from chronic diseases.

Similarly, Section 6 provides opportunities to run lodges, hotels, public transport and other similar services within the National Park and Reserve with due permission from the Government for the overall promotion of national Parks, reserves and conservation areas. Unfortunately, the Act has not incorporated measures that obligate owners operating such services in protected areas to the protection of wildlife and their parts. Such services, without any obligation, can easily develop channels for smugglers to enter protected areas and launch their activities for poaching and illegal wildlife trade. It has been claimed that most poaching activities were operated around hotels within the national parks. Therefore, presence of hotels in core areas helps to accelerate poaching due to frequent movement of tourists and staff.

NPWCA has been amended five times: in 1975, 1983, 1989, 1993 and 2005. The third amendment introduced a new concept and provided opportunities for institutions/organizations other than those in the government sector in the management of the conservation areas in Nepal. The rationale behind Section 16 (kha) to the NPWCA was the realization that the government alone is not capable for the management and protection of conservation areas. Therefore, participation of other partners was felt to be necessary. The inclusion of Section 16 (kha) to the NPWCA provides the opportunity for the involvement of NGOs, Civil society, the private sector and other institutions in the management of protected areas and the control of illegal wildlife trade and poaching.

The Fourth Amendment of 1993 in NPWCA, by adding Section 2 (Na2), 3 (Ka), 3 (Kha), 16 (ga), has brought some new concepts. The amendment has allowed the introduction of buffer zones around the protected areas. The Fifth Amendment, introduced in 2005, allows management responsibility over protected areas to organizations established under the Act.

Section 3 (Kha) allows for the full responsibility of wardens in the management and development of buffer zones and protected areas. The warden is also empowered to form User's Committee by consulting with local people for the management and utilization of forests and buffer zone areas. Such amendment encouraged the role of local communities in forest product management while restricting their scope and responsibilities in controlling wildlife trade and poaching, as well as their participation in wildlife conservation provided under 16 Ga 2 of NPWCA. This amendment has, significantly, made provisions for any person who provides information that leads to the conviction of any person for killing or wounding endangered wildlife such as rhinoceros, tiger, musk deer, clouded leopard, snow leopard and gaur the entitlement to a reward not exceeding NR 50,000/- .For other protected animals, the informant shall be entitled to a reward not exceeding NR 25,000/-.

Another feature of the new amendment under Section 26 is a heavy penalty to persons found guilty of killing, injuring or of being in the possession of trophies of rhinoceros, tiger, musk deer, wild elephant, clouded leopard, snow leopard and gaur. Any person found with intention of sale, sale, possession, buying or transferring trophies of other protected wildlife shall be punishable with a fine not exceeding NR 1,00,000/- subject to a minimum of NR 50,000/- or from 5 years to 15 years imprisonment or both.

Schedule I has not been amended in the last thirty-four years. This implies that the status of wildlife included has not improved since then. Under this Act, no one is allowed to collect, obtain or keep any part of a dead animal without a certificate. Furthermore, such goods are prohibited for sale, purchase or disposal. Pursuant to Section 26 of the Act states that any person illegally killing, wounding, purchasing, selling or transferring a rhinoceros, tiger, elephant, snow leopard, or other prescribed wildlife, or keeping the trophy of, selling or purchasing rhino horn or specimens from any other prescribed wildlife will incur a fine from NR 50,000/- to NR 1, 00,000/ or imprisonment for a period from five to fifteen years or both. But, current penal and monetary sanctions do not seem to be enough to deter those who are involved in the illegal trade in wildlife because of the high market value of those products. Although, the present fine and prison sentence was increased by the 1993 amendment to the NPWCA, it is still inadequate in proportion to the profit made. The penal and monetary sanctions for killing or injuring protected birds is remains a fine ranging from a mere NR 500/- to NR 10,000/- or imprisonment for a period of three months to two years, or both.

National Parks and Wildlife Conservation Regulation (NPWCR) 1974

The NPWCR is framed under the power conferred by Section 33 of the NPWCA. The regulation focuses improving the approval process and on measures to improve royalty earnings. Both the Act and regulations have failed to ensure obligatory services for the control of illegal wildlife trade and poaching. Lack of such obligations has boosted illegal trade and poaching within the national parks, reserves and conservation areas.

There are special Rules on the provision of licenses for scientific experiments and investigations in the reserve. The regulations include special provisions to control hunting licenses as well as import and export trophies. Rule 5 of the regulation strictly prohibits hunting at night as well as the hunting pregnant animals or those with young. The regulations contain provisions for the hunting of certain animals as well as for scientific investigation. Wardens in national parks and District Forest Officers outside parks, are entitled to make judgments on violations within this regulation.

Rule 22 provides for the collection of samples of wildlife, birds or forest products for scientific research and study purposes. Rule 28 has made compulsory conditions to the hunting license holder with regard to the maintenance of a hunting register that includes the name of hunt location as well as the species and gender of the hunt 12 hours before leaving the hunting reserve. Except for reserve personnel, there is no legal right for others to monitor this register. Rule 29 explains that if excess wildlife (above the permitted number) is hunted, this should be mentioned in the hunting register and the excess should be deposited at the nearest reserve or forest office. In the absence of strict measures, such flexible arrangements can be regarded as loopholes for legal poaching. However, the regulation visualizes some necessities to regulate the import and export of trophies under Rule 30, 31, and 32.

As per Rule 36, the government has the right to proclaim certain wildlife or birds as 'endangered species'. Similarly, Rule 33 has provided legal waivers to those who possess wildlife trophies due to authorized hunting before 14-1-1980 (2036/9/30). However, in practice, these provisions have been largely ineffective and still, illegal trophies are present in the domestic market and decorate the houses of elites. Concerned authorities are not successful in monitoring and seizing unregistered trophies.

Chitwan National Park Regulation, 1974

This regulation is also framed under the power conferred by Section 33 of NPWCA. It explicitly outlines measures for the management and protection of Chitwan National Park. Some special features of this regulation are: restriction of specified activities inside the national park, restrictions on the possession of certain goods, protection of nests, regulations on hunting and fishing, the need for government permission for mining, restrictions for grazing, the use of musical instruments, littering and poisoning. A few restrictions are also mentioned in driving vehicles inside the park. Fees for all activities inside the park are laid out in this regulation.

Rule 25 has extended the Chief Warden's judicial authority to the assistant warden -a unique feature compared to other acts on the forestry sector. However, this regulation has also not recognized the importance of the control of poaching mega species.

Mountain National Parks Regulation, 1980

The 1980 Mountain National Parks Regulation is framed under the power conferred by Section 33 of the NPWCA. Under Rule 3 of the regulations, Government may designate any area as mountain national park by publishing it in the Gazette. Rule 7 mentions the prohibited activities in national parks and Rule 8 and Rule 9 prohibits the carrying of weapons and explosive materials and trophies, fresh or dried wildlife parts without permission from the warden and strictly prohibits the damage of flora and fauna of national parks by the intended lighting of fire from inside or outside national park. Rule 10 provides protection against hunting of animals, birds or insects, eggs, nests or *gola*. Rule 11 regulates fishing in national parks. Rule 14 regulates the use of musical instruments. Rule 16 prohibits the use of any type of poison, insecticide or chemicals in the national park. Rule 17 and 18 regulate transit systems in national parks. Similarly, Rules 20-28 stipulate the authority of the warden to exercise various actions such as arrests, raids, seizures, information collection and record keeping, provision of certificates to the villagers and their domestic animals for transit and so on. Rule 28 allows the warden jurisdiction over judgment over offences committed against this regulation. Although these provisions have assisted in the control of illegal wildlife

trade and poaching, a major weakness of the regulation is its failure to implement provisions for special anti-poaching units for the control of poaching and its related trade in animal parts.

Forest Act, 1993

After the restoration of multi-party democracy, parliament enacted the 1993 Forest Act for the conservation and proper management of forests. The 1993 Forest Act was promulgated to manage national forests in the form of government managed forests, protected forests, community forests, leasehold forests and religious forests, thereby ensuring the development and conservation of forests and the proper utilization of forest products.

It extends cooperation in the conservation and development of private forests, so as to meet the basic needs of the general public, attain social and economic development, and promote a healthy environment.

Surprisingly, this Act has not explicitly defined wildlife as a forest product. However, this act clearly prohibits hunting in national forests and violation of this Act or offences concerning wildlife in the national forests is punishable as per the 1973 National Park and Wildlife Conservation Act. From the standpoint of protection of wildlife, the Forest Act has not given due emphasis to the protection of wildlife.

Since national forests have wide forest coverage compared to the protection and conservation areas of Nepal, the provisions, mechanisms related to the management and protection of wildlife as well as wildlife trade and poaching, should receive due attention for inclusion in the Forest Act.

A lack of strict security system in national forests allows easy trade routes for wildlife traders using national forests. By invoking Section 22 of the said Act, effort can be made to control wildlife trade within the national forest area.

Clear and explicit regulations are necessary for the management, protection and control of wildlife and poaching in various categories of national forests such as community forests, protected forests, religious forest and leasehold forest.

Forest Regulations, 1995

The 1995 Forest Regulations are framed under the power conferred by Section 72 of the Forest Act. For the management of government forests, the Department of Forests has to prepare a management plan including the 13 points mentioned under Rule 3. However, these 13 points do not include the process of management and protection of wildlife in the national forests. As a result, district forest offices do not give due consideration to protect wildlife in government managed forest.

Most community forests in Nepal are highly protected and very few community forests implement management and utilization programs. Because of extensive protection measures by community forest user groups in the past, wildlife populations have increased considerably- particularly in the community forests of the hilly regions of Nepal. The increase of leopards in hill community forests has resulted in casualties of local inhabitants. Similarly, there are reports of accidental and intentional killings of wildlife in the hills. Community forest user groups are alarmed by such incidents and are demanding that these concerns be addressed.

Rule 31 of the regulation strictly prohibits hunting of wildlife in community forests. These provisions have successfully assisted in controlling poaching and illegal wildlife trade, however, special provisions should exist for the management and protection of wildlife in the operational forest management plans of community forests.

Legal arrangements of management, protection and control of poaching of wildlife and its discouragement in trade and marketing should also be given considerable attention in other forest categories such as leasehold forests, religious forests and private forests.

Buffer Zone (Management) Regulations (BZMR), 1995

The BZMR is also framed under the power conferred by Section 33 of the 1973 NPWCA. Rule 5 has assigned the responsibility to the warden to prepare operational management plans for buffer zones for

submission to the Director General of DNPWC for approval. It has also been stated that it is imperative for the Warden to consider 14 points mentioned in Rules 5 (2) while preparing the operational management plan of buffer zone. However, the important issue of controlling mechanism of illegal wildlife trade and poaching is not addressed. However, Rule 7 has accorded responsibility to the warden in ensuring the conservation of wildlife and biodiversity. Similarly, provisions to be included for the forest management, protection of forest and wildlife and environment have been outlined, but explicit arrangements for the controlling mechanism of illegal wildlife trade and poaching is missing in the Users' Committee Operational Plan. Rule 13 (3) says that the UC work plan should include measures for wildlife conservation. Rule 17 restricts hunting and other activities that harm wildlife.

Rule 35 also makes hunting provisions. If increases in wildlife numbers inside the park or reserve exert pressure on buffer zones, the DNPWC or the Park/Reserve may allow hunting permission inside the buffer zone for animals other than endangered species. Such incentives show that this regulation has provided benefits to local people, however, legal responsibilities and stipulations for authority to be awarded to locals for controlling illegal wildlife trade and poaching, are absent.

Conservation Area Management Regulations (CAMR), 1996

Rule 8 of CAMR allows the conservation Officer to form a conservation area management committee, comprising of a chairperson and members from each of the concerned VDC's. Other than these, five members including woman, deprived castes and social workers can be nominated by the Conservation Officer. In these committees, the inclusion of members from local NGOs working for the protection of conservation areas would be useful, since Rule 9 provides the rights and duties of committees in protecting wildlife in conservation areas. Rules 13, 14 and 15 explain the procedures for preparing and approving operational management plans of conservation areas. Although the Government of Nepal realizes the important role played by NGOs and provides rights to institutions to manage conservation areas, these rules do not facilitate the participation of NGO's. The role and capacity of local NGOs in the preparation of management plans is not adequately recognized and their ability to significantly contribute to conservation efforts in general and to the control of illegal wildlife trade and poaching specifically is not fully capitalized on.

Rule 31 of this regulation has delegated the judicial authorities to the liaison officer designated by the DNPWC, MFSC for dealing with offences against this regulation.

Conservation Area Government Management Regulations (CAGMR), 2001

Under Rule 44 of this regulation, local people of conservation areas are accorded the right to hunt wild animals as per quota and location restrictions in a bid by the government to preserve the traditional culture of local communities. To implement such provisions, it is imperative to consult with ethnic communities/ organizations or seek their participation in determining quotas and hunting procedures whilst simultaneously ensuring wildlife conservation in protected areas.

There are a few other regulations such as the 1997 Wildlife Reserve Regulation, 1987 Khaptad National Park Regulation and the 1997 Bardia National Park Regulation. All of these are similar, but each applies to a specific location.

3.1.3 Other Relevant Acts and Regulations

Environment Protection Act, 1997

Although the 1997 Environment Protection Act is primarily concerned with evaluating the environmental impact of human activities, the Act does contain some significant provisions for protection of wildlife. The Act empowers the Government of Nepal, by notification in the Nepal Gazette, to establish an environmental conservation zone at any site within Nepal. A ban may be imposed on prescribed activities within an environment conservation zone. There are few provisions that prohibit impairment to wildlife in the environment conservation zone.

Environment Protection Regulations, 1997

This regulation prohibits any person from buying; selling, trading, hunting or causing harm to wildlife in an environment conservation zone. Any person is entitled to lodge a complaint against another individual for

acting illegally in an environment conservation zone. The regulation further stipulates that environmental impact assessments should consider the impact on wildlife.

Import and Export (Control) Act, 1957

The 1957 Import and Export (Control) Act (IECA) contains provisions for the control and restrictions on import and export of any goods or objects. Under Section 3 of the IECA, the Government of Nepal is empowered to impose any restriction on any goods in any area of the country. Nepal government may do so through a notification order, enforced with effect from the date mentioned therein.

Export or import activity-involving goods that are prohibited or are different from those prescribed in an issued license under export- import rules could lead to the goods being confiscated and the trader being punished. As per Section 5 using false particulars to obtain a license, or hampering the work of a customs official is also punishable. Using the power conferred by this Section of the Act, the Government of Nepal has published a notice in the Nepal gazette (30-11-1992 Vol.42 no 33) for the restriction of the following wildlife species:

- i) Wild animals,
- ii) Any wild animals parts including gall bladder,
- iii) Musk Pods,
- iv) Reptile skins (lizard).

The IECA also provides punishment under Section 5 of the Act and authorizes the customs officer judiciary power for the violation of the Act. Section 6A provides provisions for rewards for information about the violation of restricted or controlled import/ export items.

Police Act, 1995

The 1995 Police Act indirectly contributes to the control of illegal wildlife trade and poaching. Section 15 of this Act stipulates the duties of the police, which include searching for criminals and arrests. The duties of the police are broad enough to include the investigation, arrest and prosecution of person(s) involved in trade in endangered species or trade in species included in Schedule 1 of NPWCA. As the police are the principal law-enforcement agency, it is also within their jurisdiction to prevent the illegal killing of wildlife and trade in endangered species. However, the police forces lack specific training and equipment in this field and thus are often ill equipped to fulfill their duty in controlling illegal wildlife trade and poaching. Therefore, it is impractical to expect the police to be the sole agents in the prevention and control of trade in wild animals and their parts. In urban areas, community police forces could be provided with adequate training and equipment. In addition to this, the police force can be motivated with incentives. Such measures could contribute to decreases in illegal wildlife trade and poaching.

Custom Act, 1963

The Custom Act of 1963 is one of the most important acts that aim to control the illegal import and export of any goods or objects. Similarly, it provides certain procedures of import and export of any goods or objects. Pursuant to Section 5(4) of the Act, custom officers may stop any illegal import and export and take necessary action under Section 5(a) of the Act.

Concerned firms/persons are required to fill out and submit a customs form to the Customs Officer with necessary descriptions when importing or exporting any goods or objects. Such processes aid in controlling international trade in endangered species.

Section 14 of this Act empowers the Customs officer to check any suspected goods or object Section 15a also provides rights to the Custom officer to search any location by fulfilling certain formalities. Similarly, Section 19 of the Act allows the rights to seize any goods or objects if necessary.

As per Section 22, any goods or objects seized or left at customs will be the property of the government. Section 22a allows for the payment of a reward for information received regarding illegal import or export with certain criteria. Albeit, the Customs Act has not explicitly mentioned or defined any goods / objects as wildlife or any derivative of wildlife, it has its own provisions of controlling the illegal trade/import and export.

There may be doubts as to whether customs officials bear the capacity to prevent and control the export and import of the illegal trade in wildlife and its derivatives. If customs officers are serious and knowledgeable about the illegal trade in wildlife and its derivatives, then custom offices can take immediate action. Therefore, it is very important to foster awareness about illegal wildlife trade in customs offices. Likewise, there have been arrangements for locating forest technicians in many Customs Offices of Nepal, but this has not been fully implemented. Implementation of this arrangement with prime focus on placing of forest technicians will assist in control of such illegal trades.

Treaty of Trade between India and Nepal, 1996

In an effort to expand trade between these two neighboring countries, the Governments of India and Nepal entered into a bilateral trade agreement in 1996. The treaty provides for preferential treatment for importation into India of certain goods from Nepal. These include forest produce, which has not undergone processing, as well as Ayurvedic and Herbal medicines under Article IV. Under this treaty, a certificate of origin issued by the Government of Nepal is the only document required for presentation to India's customs authorities at the time of import.

South Asian Wildlife Enforcement Network (SA-WEN), 2007

At the 10th Governing Council of South Asian Cooperative Environment Program (SACEP), held in January 2007 in Kathmandu, Nepal, a decision was made to incorporate a special work program for combating illegal trade in wildlife and its products. The program aims at strengthening enforcement of CITES in the region and in controlling illegal domestic and international trade in wild fauna and flora which is seen as a direct threat to biodiversity conservation efforts by all countries.

In order to take progress with this decision, SACEP entered into a Memorandum of Understanding (MoU) with TRAFFIC International to develop a South Asian Wildlife Trade Initiative (SAWTI) on July 20, 2007.

Main aims of MoU are,

- Develop and implement a South Asia Regional Strategy for combating illegal trade in wild flora and fauna,
- Ensure that the legal trade in wildlife is maintained at sustainable levels in South Asia,
- Establish the South Asia Wildlife Enforcement Network (SAWEN) and strengthen partnerships, alliances and other cooperative mechanisms to foster impacts of the progress at the national and regional level.

Under the MoU, SACEP and TRAFFIC developed a South Asia Regional Strategic Plan in Wildlife Trade.

The South Asian Regional Strategy is an attempt to respond to two major challenges facing Wildlife trade and the implementation of CITES in the region:

- to develop practical ways to support governments, non government organizations and individuals and civil society in ensuring the effective implementation of national laws, policies and programs that leverage real and meaningful change in combating illegal trade,
- to strengthen the relationship between conservation and poverty reduction in such a way that wildlife consumption is maintained at sustainable levels.

(Source: Boaz, AA. 2008)

SAWEN was appointed to the role of developing a South Asia Regional Strategic Plan on Wildlife Trade for the period 2008-2013. The Kathmandu workshop - organized by the Nepal Ministry of Environment, Science and Technology, SACEP, WWF Nepal and TRAFFIC - also agreed on the establishment of a South Asia Experts Group on Wildlife Trade.

The SACEP held a meeting in May 2008, which established a South Asian Wildlife Enforcement Network (SA-WEN) modeled on the successful ASEAN-WEN program of Southeast Asia.

Nepal's legislative provisions are not enough to control trade in wildlife products unless the government acts cohesively in enforcing law and imposes stern action against illegal traders (Aryal 2004). As CITES is only a convention, a legal base must be created for its implementation. As the international racket of illegal trade in endangered wildlife species and their parts is very powerful, a single agency such as the DNPWC is

unable to control such illicit activities by itself. The Department of Forest is legally responsible for wildlife law enforcement throughout the rest of the country. Lack of coordination and proper communication among these institutions has increased the illegal wildlife trade in Nepal. Similarly there is lack of coordination effort and proper communication between the neighboring countries of India and China regarding various illegal trade routes, and the seasons when illegal traders are active (Maskey 1998).

Until we can truly enforce measures that increase detection of deliberate and incidental poaching of wild animals and plants within national parks and protected areas, the bank account of future biological wealth might be considerably less secure than we currently assume (Dobson & Lynes 2008). The National Parks and Wildlife Conservation Act (1973), the Forest Act (1993) as well as the regulations under them are the legal instruments for the protection of wild flora and fauna. In addition, the Aquatic Fauna Act (1961) and its regulations provide further protection to flora and fauna. Both the NPWC Act and Forest Act empower the Chief Warden/ Warden and DFOs to enforce these Acts and Regulations and take legal action against offenders. Line agencies of the government, conservation partner organizations and local people complement the government's conservation efforts (DNPWC 2007). As in many other countries, early protection efforts were intended to protect prized animals and valuable timber trees rather than habitats and complete ecosystems (Sharma & Wells 1996).

3.1.4 Transborder Cooperation

To address various issues including poaching and illegal trade in wildlife, a series of transboundary meetings between India and Nepal were held on January 3-5, 1997 in Kathmandu, on February 28 – March 1, 1999 in New Delhi, and on September 13-15, 2002 in Kathmandu. Similarly, a tripartite meeting was held among the delegates of China, India and Nepal to discuss the illegal trade and use of Chubas (a special overcoat made of tiger skin) on June 22, 2006 in Beijing (DNPWC/MoFSC/GoN 2007).

There is a lack of resources in the DNPWC to effectively implement CITES in Nepal. Poachers and traders are seldom brought to justice and convicted. When they are, their light sentences are unlikely to deter future poaching and illegal trade (Dinerstein et al. 2007). Nepal's global image of conservation leadership may be questioned as a result of the illegal activities of international wildlife smugglers. Nepal has an obligation to take actions against these illicit activities as a signatory of CITES.

Traders and poachers operate freely in border areas (WCN 2007 c.). Wildlife issues are rarely a priority agenda in border coordination meetings (DNPWC/MoFSC/GoN 2007). Criminal networks have invested too much in these operations to abandon them (EIA & WPSI 2006). There is a wealth of existing data available in police and court records which could be analyzed to begin the process of shutting down these criminal networks (EIA & WPSI 2006). Today, police and other enforcement agencies have sound knowledge of wildlife crime and how they can prevent the flow of trade through international borders (WCN 2007 d). It seems that wildlife protection is perceived as low priority area outside the core issues of the DNPWC with indifferent Police and Customs Officials. The agencies with the responsibility of CITES implementation lack coordination (Aryal 2004). Despite the existence of formal channels of communication such as the World Customs Organization and Regional Intelligence Liaison Officers, Interpol, CITES and bilateral agreements, these are rarely if ever used for cross-border enforcement operations against skin traders (EIA & WPSI 2006).

Poaching for high value products for international markets, such as musk glands from musk deer, is fundamentally different in scope and degree to the occasional poaching of wild animals to supplement rural diets (HMGN/MFSC 2002). Once a differentiation has been made between professional and subsistence poaching, it would be possible to recognize other incidental forms of poaching that also have a significant impact on the viability of plant and animal populations (Dobson & Lynes 2008). Absences of political understanding and efficacy means that, even large amounts of biological information are inadequate to achieve conservation goals (Johns 2007). Coordination among varied organizations is a major challenge for the DNPWC whose expertise is mainly to manage the protected areas and protect wildlife (DNPWC/MoFSC/GoN 2007).

There has been a lack of political will in India, Nepal and China to develop a new mechanism to combat this trade (Yonzon 2006). Government decisions lack consistency among various line agencies (Shrestha &

Joshi 2007). The recent Kathmandu seizure of 2 leopard skin and 1 tiger skin on August 10, 2007 had been documented in the Times of India – a daily newspaper from New Delhi indicating that transnational crime is on the rise (WCN 2007 c). Escalating wildlife trade and the failure of government responses, violate international conservation accords and effectively, result in a lack of implementation of national wildlife law (Baral & Heinen 2006). The judiciary has acted swiftly in seizure cases in Nepal, but the penalties are either insignificant or non-existent (Yonzon 2006). Where the illegal trade in specimens is concerned, there are many cases where offences have been committed by well-known experts in the field (Cook et al. 2002). Verdicts passed by quasi-judges on cases of perpetrators of wildlife crime, traders, poachers and others could result in biases (WCN 2007 c).

4. Investigation and Analysis of Poaching and Illegal Trade

4.1 Linkages between Poaching and Illegal Trade

The exact linkage between poachers and smugglers is not confirmed. Several guesses have been made based on the personal experience of staff and explanations given by arrested offenders. Local involvement has made strides since the beginning of conservation efforts. The involvement of family members in poaching and illegal trade wildlife has been found. In one instance, a couple was found to be involved. In many cases, youngsters are also involved. A poacher is as guilty as someone who aids a poacher or guides them through the forest. Most people on the list of suspected persons by the district forest office for their involvement in poaching of rhinoceros have been arrested in a given incident.

Poverty is directly related to poaching and illegal trade in wildlife in and around parks. Addressing poverty will simultaneously aid in addressing poaching. Options that nurture sustainable livelihoods in these areas can go a long way in improving economic conditions, which should ultimately greatly reduce incidences of poaching.

Poaching and illegal trade are not only related to conservation but also to the economic, political and social sphere. Programs require sustainability and transparency in order to succeed. Funds need to be invested in the field, but monitoring is rarely carried out, thus outputs are not clear. This lag in sensitizing policy makers at the national level is a major contributory factor for the continuation of sustained poaching and illegal trade over conservation efforts. It is reflected in the reported incidences of the involvement of politicians and elites in poaching and wildlife trade operations. There have been cases of the same poachers being apprehended on numerous occasions in Chitwan. Offenders caught for violating wildlife laws were dealt with under park authority and decisions about offences were meted out by the park. In some cases, however, other government authorities such as CDO have interfered in the process: for example, sending offenders to Kathmandu without park approval thus furthering impunity and weak rule of law. Interferences and imposition of power by other authorities within the park has further weakened park functioning. Jurisdictional clashes between line agencies are also a problem.

The issue of poaching and illegal trade in wildlife products is complex. The issue is further complicated by the procedures applied to deciding on punishment and penalties. Penalties vary greatly, depending largely on which institution is responsible for punishing offenders. Most offenders have been found to be poor locals, ethnics and illiterates. Historically, poor locals (mainly living on the forest edge) have been denied access to park resources and activities. Thus, many programs are concerned with raising awareness, with the aim of improving relations between local people and the park. Cooperation is vital in order for locals to gain from park activities and practices whilst simultaneously fostering conservation. This is vital given the legacy of antagonism between local peoples and parks.

Involvement of a wide range of people was found in poaching activities. It is not just poor people who are supposedly 'poaching for livelihood purposes', but elites are also involved. Even prominent political leaders with high positions in political parties exert tremendous pressure on park management to release apprehended poachers. In many instances, the issue moves beyond the scope of internationally acclaimed conservation organizations such as WWF and NTNC.

The issues of poaching and illegal trade are not merely related to conservation systems, but also involve governance, politics and societies. There is no panacea to control poaching and trade in wildlife. In the Nepalese context, there are many factors influencing poaching and trade. Noteworthy factors include

poverty, greed, impunity and corruption. The politicization of crime and protection of criminals as well as lawlessness compounded with the aforementioned factors, contribute to the continuation of poaching. Protected areas are not only conservation areas, but also play an important role in socio-economic dimensions. The buffer-zone concept involves participatory conservation and benefit-sharing with local communities. Official commitment to CITES is still lacking, and wildlife crimes continue to spread across the region.

Conservationists believe that poaching activities will never be stopped, as long as demand for wildlife products continues. They clearly link illegal trade with poaching. In order to control wildlife poaching, it is essential to confiscate wildlife parts from poachers before they reach traders. Greed must have been the real cause of poaching and illegal trade in wildlife items. The nexus includes a wide range of people - from the high profile rich and powerful down to local villagers.

Illegal routes (as opposed to legal checkpoints) are frequently used by traders. Illegal traders of wildlife parts may also export trade through such routes - hence resulting in gaps in detection. Staff currently working in customs, including the chief custom officer, possess only cursory knowledge about CITES. Political interferences in trade operations are significant. Traders are able to influence the customs administration and police. Customs and police staff patrol an area of 10 km from customs office but, in practice, this was not possible. There were multiple points for entering China without detection. Lax security and administrative pitfalls contribute to illegal trade passing undetected. The main route currently used by illegal traders was Larcha, where no regulatory mechanism and security presence exists.

During transboundary meetings forest and wildlife officials of Nepal and India used to share their ideas and experiences on the control of poaching wildlife and illegal trade in their parts. Discussions were held on poachers and smugglers focusing on their names, addresses and behaviors. But the 'wanted' individuals were at large. First, the government network does not have a reliable system of sharing detailed information about smugglers. Moreover, smugglers were found to be well connected at higher levels of policy-making, including garnering support and protection from political parties.

Occasionally, the nexus between poachers and illegal traders has become a threat to the lives of protected area managers and law enforcement personnel. Park personnel have faced several threats from unidentified individuals who come disguised. For example, a Bardia based park official was chased by motorcyclists on the way to Gularia from Bhurigaon in 2007. Somehow, the official was not hurt. Similarly, custom officials at Tatopani had to hide under a truck in chilling winter night in 2008, in order not to be observed by agents of smugglers.

The porous border between neighboring countries (China and India) is the main reason that illegal trade in wildlife products has flourished in Nepal. Yaks are used to ferry logs and timbers, as well as 'high value low volume' products like tiger bone and rhinoceros horn.

Poaching and illegal trade incidents depend largely on the political situation of the country. Usually, rhinoceros and forests were under high threats during major political changes and transition periods. However, their populations have recovered, which is a biological phenomenon.

4.2 Institutional and Legal Gaps

4.2.1 Institutional Gaps

Locals are not satisfied with protection measures for park animals. The mobilization of security personnel in the field is not considered to be effective. A surveillance gap is evident from reports of park authority, as carcasses of animals in many cases were recovered in a decomposed state. Poachers are well aware of security systems of parks and are familiar with areas not covered by surveillance patrols. Additionally, individuals involved in poaching and illegal trade are protected by politicians and elites in power, creating a situation of impunity to wildlife crimes.

Patrolling and surveillance are seriously inadequate to keep wildlife safe due to lack of resources for anti-poaching units. The security of individuals in anti-poaching operations is not ensured. Social security, financial support and general encouragement are severely lacking, thus discouraging active involvement in anti-poaching operations. Moreover, threats to individuals during operations remain a problem. This

situation of impunity has contributed to frustration among Park personnel involved in anti-poaching operations given that their task is riddled with unseen risks and weak support.

Local groups such as BZCFs, BZUCs and other NGOs work towards curbing wildlife trade and poaching in the Chitwan area. A youth group, Yuva Jagaran Aviyan, is involved in local conservation awareness and lobbying to control poaching and trade. These local level programs are certainly effective in raising awareness in the community. Patrolling of forests and villages, school programs as well as participation in local festivals with the theme of antipoaching and trade-control, has contributed, at least partly, to conservation awareness.

Responsibilities toward conservation are not internalized in the operations of Park personnel, community organizations, NGOs and other government agencies. Clashes between policy and practice are pronounced. The poor and certain ethnic groups, targeted for buffer zone programs have very limited roles in decision making processes; despite suffering with the socio-economic causes and other with park and wildlife.

Currently local members of APUs are active in their respective areas of responsibility. Informants are regularly contributing to such efforts. BZUCs are also involved in anti-poaching efforts. In each Buffer Zone Community Forests (BZCFs) a forest guard is present in order to safeguard wildlife mobility. BZCFs have effective strategies for containing wildlife wandering out of the park. Some BZCFs hold a number of rhinos and tigers under security of the guards. The youth network, *Yuva Jagaran Aviyan* (Youth Awareness Campaign) works on raising awareness at the local level and are invaluable as watchdog for the illegal activities around the park. Local anti-poaching groups have served as backup in the rescue of wounded or wandering animals. The users in the BZ report to the authority through the UCs, UGs or other local organizations about casualties and suspects. The park rewards informants for helping the authorities in the capture of poachers or traders or for information provided, leading to animal rescues. These reward incentives provision have increased local involvement in community groups.

Youth groups are also organized against poaching. These groups are active in conducting independent patrolling in Bardia. They inform park administration of any suspicious activities in their periphery. These youth groups have been effective in the buffer zone, since the government had not placed any staff there.

School students are involved at various levels in anti-poaching activities. In Bardia, a network of 81 schools has effectively mobilized students under eco-club campaigns. The school management had introduced biodiversity and conservation into school curricular activities. On several occasions, school students have contributed to anti-poaching operations. Vigilance on the part of children could help in informing authorities about suspected activities in a village. However, park management and protection units should also be careful about the security of these children.

Security in the field is very poor. It has been difficult to reinstate security mechanisms after the conflict. During the conflict period, the army's priority was to deal with the insurgency only.

Institutions such as NTNC had a supportive role in areas of research, monitoring and database maintenance.

There are two forensic laboratories in the country, one is the National Forensic Science Laboratory (NAFOL) at Khumaltar, Lalitpur, and the other exists within the police. Strengthening the capacity of the NAFOL has been realized by the government. The long-term vision is to include DNA testing.

The Central Zoo at Jawalakhel, Lalitpur is used as a pool for live specimens - required if control samples are not available for comparison. NAFOL is run solely through a government grant. Ministers rarely visit the laboratory. Their visits occur when special programs are planned – such as the installation of new equipment. NAFOL was not on the government priority list. However, NAFOL was declared an official laboratory in December 2008 for investigating wild animals and their products by the new Nepal government.

A 'Crime Scene Investigation' training program was conducted in Kathmandu by a South African resource person (ex-policeman) on how to collect physical evidences and forensic samples –blood, hair, food etc.

Two major issues needing address with regards to the forensic system are:

- a. Organize a needs assessment workshop to identify necessity equipment/facilities at Natural History Museum at Swoyambhu, NAFOL, DNPWC, NTNC, and
- b. Training to Custom Officers for samples/specimens identification and Crime Scene Investigation to others for collecting forensic evidences (DFO, Warden, Appellate, and Supreme Court).

The police were not much involved in the investigation of the wildlife crimes. In the case of Chitwan, one person was arrested by the Chitwan police, but with a fake rhinoceros horn.

In the summer of 2008, a parcel containing 25 Kgs of tiger bones and skins was caught in Kailali. The local police demanded bribe of Rs600,000 so that the case could be dismissed. However, the cadres of Young Communist League (YCL) became aware of the matter and handed over the confiscated items to the district forest office at a press meeting. The YCL also requested for an inquisition into the case and an interrogation of the inspector who had asked for the bribe.

In the case of Hilly region, the local communities did not see any immediate benefit by conserving wildlife. Without immediate benefits at the community level, antipoaching activities would be unrealistic.

The intention of the custom and police officials was primarily to earn money somehow. The park rangers get salary and ration, but their efficiency is not increased. Rather it would be more practical to recruit informers.

There were 52 personnel at the Gaddachowki custom in Kanchanpur district. So far no one had received any training from forest/park offices on the CITES or similar programs. They did not have any intelligence system.

The Kanchanpur DFO had strengths of 182 personnel spread in three areas each with five ranges. So far no records were available on wildlife status.

Most of the staff in the customs department is not familiar with issues of poaching and trade. The records of seizures in these departments are notoriously low regarding such consignments. Customs offices deal with trade through legal routes. When considering trade through the Tatopani route, wildlife trade records were not well maintained. Capitalizing on the precariousness of the political situation, the mobility of illegal traders regarding consumer goods has increased. Customs offices have not been able to regulate trade through checkpoints. Questions then arise as to how detection of goods through other routes could be achieved.

Customs at Gaddachowki, Kanchanpur is infrequently a channel used for exporting wildlife products. This is probably due to the regular presence of the police force. A Similar situation exists in Nepalgunj.

The district forest office in Nepalgunj had filed several cases of illegal wildlife trade. In 2009, there were four cases still active at the appellate court. Four persons who were found involved in the illegal wildlife trade were bailed out at the sum of Rs14,000 to Rs70,000 per person.

Intelligence System

After 2001, the efficient working of informant networks has been greatly hindered due to the insurgency. Informants are removed due to management problems. The result is reflected in the number of casualties of wildlife and hindrances in the operation of anti-poaching units. However, an intelligence system of CNP remains strong throughout the conflict period. Several arrests of poachers and traders, even of high-profile individuals involved in wildlife crime, have been possible through the collaboration between organizations and individuals working to protect wildlife from poaching and trade. Poachers and traders have been caught by staff members whilst traveling to nearby districts and as far as Kathmandu. The police and DNPWC have assisted staff in raids on suspects outside the premises of the park.

A general agreement is necessary before poachers and smugglers are targeted. A central unit of intelligence is felt to be necessary so that field activities can be further backed up. Such suggestions have been under consideration for the last decade. The units could then work overtly and/or covertly depending upon the situation. Such units could have representatives from critical sectors such as police-crime investigation,

department of forest, ministry of forest & soil conservation, department of investigation, prime ministers' advisor and so on.

The present security system at field level is traditional. The SOP – Standard Operating Procedures is being reviewed. Initiatives at the center and at field-level are lacking. At the center, poachers and traders are being freed. A watch group system is important at the center and in specific areas.

Field Guard Posts

The field guard posts are based on the vulnerability of an area, regarding the poaching of wildlife. Guard posts in CNP are not adequate in number. The army has 30 posts in CNP. For example, in the Madi sector, there is a gap of about 12 km between security posts. There are also large areas to be covered during patrolling. Posts do not have adequate resources. During the rainy season, already a period of greater vulnerability to poaching, staff mobility is hindered by swollen streams. Attempts at creating better communication in the park have not been adequately addressed. Field personnel rely on public communication systems, even in highly sensitive cases. The communication gap between posts and headquarters is evident due to a lack of efficient communication system.

The number of field posts has been greatly reduced due to changes made during the conflict period. For example, number of posts has decreased from 34 before the armed conflict to 7 during the conflict. These security arrangements have created huge opportunities for poachers and illegal traders in the park. Nevertheless, attempts to keep wildlife and biodiversity safe from illegal activities were carried out with caution and dedication throughout this period. The reestablishment of more guard posts is underway.

During the conflict, the Babai Valley suffered the most from rhinoceros deaths. The primary function of protection units was shifted to non-park activities. Plans have been made to revive an abandoned guard post, but this necessitates new infrastructures. In Chitwan, out of 34 original guard posts, 22 had been reinstated by 2009. Also, the protection unit has planned to replace an old battalion in phases with a newly skilled and trained battalion. Replacements have been completed in Bardia during 2009. The Shuklaphanta protection unit would also have been replaced in 2009.

Mobile anti-poaching units

The park patrolling system attempts to provide surveillance throughout the park. The army and park personnel patrol the park area. Anti-poaching units, consisting of local APU members and Park personnel, patrol the area outside the park. An informant network operates in the villages and settlements around the park. Paid informants trace illegal activities in their respective areas and communicate this information to the park. Raids carried out to catch poachers and smugglers as well as to seize wildlife derivatives are made possible due to these informants. Local community members from BZUCs and local level anti-poaching units also patrol the forests in the BZ as well as outside. District Forest Offices also undertake anti-poaching patrolling in the forest areas under their jurisdiction.

There is no established intelligence system in LNP to control poaching and trade. There are no mobile anti-poaching units within and around the park. Protection depends wholly on park personnel and NA patrolling. Field guard posts (park and army) that were evacuated during the conflict period are in the process of being rebuilt. There are 10 Park posts operating at present as opposed to 15 before and 7 during the conflict. Army posts are yet to be rebuilt to the same capacity as before the conflict. Locations of guard posts have not been altered, as they are in strategic locations suitable for viewing and sensitive to wildlife. Field level protection mechanisms involve the regular patrolling by park personnel and army inside the park. Park personnel also devote time and effort to protection in BZ. The NP and staff are not directly involved in inquiring about illegal trade through the route and checking travelers and goods. However, whenever information on illegal trade in wildlife and wildlife products is obtained, Park personnel and/or army get involved. No negative linkage of tourism with poaching and illegal trade has been identified in LNP. Moreover, tourists have sometimes informed authorities about events such as gunshots, fire and other suspicious activities in the park. Locals frequently complain or inform about wildlife damage and attacks. Sometimes, local people inform on poaching and trade. Regular patrolling by Park personnel based on their own assumptions of the likelihood of wildlife encounter (a sort of monitoring) is the main means

of gathering information, since no scientific research or surveys have been carried out regarding poaching and illegal trade.

Army personnel feel that their current strength in park/reserve is not adequate. The current strength should be doubled in parks such as Bardia, where the area is large. Bardia, with an area of 968 sq km, has two companies, whereas Chitwan, with an area of 932 sq km has one battalion. Similarly, the protection units should also be equipped with modern facilities and tools such as communication sets, vehicles and camping gear.

There were a few instances where army officers did not obey the orders of the Chief Warden to clashes in personal egos. Under such circumstances, according to the protected area managers, it would be more practical to have separate armed guards under the Chief Warden. By doubling the existing force of 200 park scouts, the park management would become highly efficient and costs would remain insignificant compared to increasing the number of army, whose strength is already 850 to 1000 in a national park. According to some protected area managers, the army is less committed given that their involvement is temporary (around two years). It is not desirable to maintain the army where public contacts have to be made. However, some protected area managers have pointed out that the army are ready and eager, round the clock, and would join in patrolling at any time. Night patrolling is carried out with the help of army only. Not all army personnel carry guns. Depending upon the situation, sometimes only five out of 20 soldiers carry guns.

Subordinate personnel (rangers and scouts) are always supportive of the officers' initiatives. During the insurgency, several rangers/guard posts were merged, resulting in gaps in security in some critical areas.

There is no clear mechanism for implementing the existing policies. Some informers are hired for information gathering. There is no government budget available for informers. However, monetary incentives for informants are to be based on the authenticity of information provided. Sometime, an informer receives Rs 500 to Rs4000 per month. Cash rewards have been effective motivators for informers. With the help of conservation partners, donors and trust, cash rewards of up to Rs100,000 was handed over to informers on a phase-wise basis in Chitwan.

Experience shows that the higher the tourist flow, the lower the number of poaching incidences. With regular activities in the parks (such as jungle walk, jungle drive, tented camping, canoe riding, elephant riding etc), and thus the strong presence of conservation-friendly people, the lower the number of intruders. So far, tourism has not created any negative impact in CNP.

Human-wildlife conflict is very high in and around protected areas. Wild animals destroy crops in farmlands outside the boundaries of protected areas. Local community members are naïve in their actions. In Chitwan in 2005, five individuals came forward to the chief warden, admitting to have killed a rhinoceros for destroying their crops. According to the prevailing laws, the chief warden had no choice but to fine them at least Rs50,000 each totaling Rs250,000 against the crime.

The Nepal Army should shoulder responsibility for intelligence in protected areas, since they are well equipped and trained. On the other hand, the civil administration (Chief Warden and District Forest Office) should focus on judicial matters. Occasionally the Indian army intelligence has informed the warden's office of 'suspected persons' with specific addresses.

Sometimes, media is quick in breaking news, which leads to negative impact. When news is broadcast, smugglers or other culprits hide or cross national international borders. However, overall, the media had played an active role in creating public awareness and alerting government officials and traders.

According to park management officials, the judiciary and the appellate court have been strong in wildlife cases. Judges have also been invited to the parks for orientation.

According to park management, the forensic lab capacity in the country is not up to the standard. In many instances, crime scene investigations involve gathering information: finger prints, remaining materials and foot prints etc.

4.2.2 Policy Gaps

Poverty trap

People residing on park borders are affected by destruction caused by wildlife. Wildlife is sometimes killed in retaliation. Politics and policy do not, however, address these issues adequately and, instead, approach poaching as a singular phenomenon with a singular cause. For locals, the central issue is economic hardship. Rural populations are poverty stricken and always in need of money to sustain basic livelihoods. They frequently encounter wildlife in agricultural plantations and in forests. These people have been easily lured by poaching syndicates with promises of easy money. Local community's familiarity with parks and animals along with their intimate knowledge of animal behavior and skills in trapping and killing wildlife, locals possess invaluable knowledge and skills for poaching syndicates. Locals get trapped between dire economic conditions and the risks associated with poaching. In most cases they take a safe passage to parks and get their task done, only to be caught later by park authorities. Stiff penalties meted out to offenders often create a spiral of poaching aimed at easing economic hardships and debts. Local communities often bear the brunt of punishment and penalties from poaching, whilst traders and lurers often manage to avoid being caught.

Communities residing near forests are poor, marginalized and backward. They are dependent on forests resources for their subsistence livelihoods. These communities continue to extract resources from forests, ranging from grass, fuel-wood to wildlife. Such extractions are for daily sustenance or for instant economic benefits. Fears of legal issues and punishment are sidelined against dire poverty and greed. Livelihood opportunities away from destructive activities (extraction of forest produce like-timber and wildlife) to constructive options (agro forestry, ecotourism) would certainly reduce local involvement in poaching and trade.

A comprehensive analysis is required into the issue of livelihoods of marginalized communities such as the Bote and Mushahar. The local community members are poorly remunerated - less than US\$100 for one rhino-horn for their field assistance, whereas traders earn as much as US\$80,000.

Compensation issues

Compensation to locals for damages caused by wildlife is often not satisfactory and fair. The BZ fund is not sufficient to cover these costs. Awareness has not been transferred to local people and institutionalization has not been properly implemented. In order to curb wildlife poaching and illegal trade, the involvement of organizations in spreading awareness in the communities in BZ is essential and should be strengthened.

The idea of insuring individuals of anti-poaching units has, in the past, been suggested by park scouts. However, individuals were skeptical about this as the fundamental principle of insurance was not well understood.

Public awareness is a key factor in minimizing incidences of wildlife poaching. Local communities should be compensated for crop damage caused by wildlife. A system of reward and punishment should be developed.

Crop and livestock insurance against wildlife damage has been implemented in recent times. For this purpose, local cooperatives are involved. The main issue is to decide upon the premium, as fully accepted by companies as well as beneficiaries. Organizations such as NTNC, have initiated interactive consultations at the grassroots.

Park Management

Wild animals in the park are suffering from chronic habitat loss - particularly due to invasion of grasslands, so animals wandering outside the park are common. The mobility of animals has increased the vulnerability of animals to poaching.

The parks have global significances; however, management methods are still traditional. Habitat and population management has not been effective. The park has been threatened by the spread of grazing land for animals as well as increases in livestock populations. This has brought about fears of starvation in

the near future for wildlife dependent on grasslands. If habitat upgrading is not seriously pursued, the survival of wildlife will be in grave danger.

The scientific community as well as other stakeholders in park management believe that the 2008/09 census of rhinoceros using specific identity of individual animals would provide an important improvement to anti-poaching operations. Once the data is generated and compiled, a lost individual rhinoceros can be identified, this will eventually lead to the arrest of poachers. This technology has been brought from Kenya where a similar system had been tried successfully. In the case of the tiger, the camera trap method had been important in identifying individual animals.

Buffer zone

The buffer zone policy needs revising in relation to policy on authority sharing between the BZMC and BZUCs. Provisions to provide alternatives to traditional livelihood to eco-friendly livelihood options for the poor in the buffer zone should be established. Management practices of the park should follow scientific norms without compromising local needs. Times have changed since the formation of NPWC Act 2029 so monitoring, patrolling and tourism activities should be regulated. Much research has been conducted on these issues but little practical action has been taken and thus, not much has changed.

The buffer zone (BZ) program has been the most successful tool in accelerating awareness of local people around the park area. The buffer zone management committee through the Buffer Zone User Committees (BZUCs) and Buffer Zone User Groups (BZUGs), has implemented awareness programs in the villages through school programs, campaigns, women's groups etc. All the BZUCs have a budget of Environmental Education comprising the 10% of the budget provided to the BZUCs solely dedicated to raising environmental and conservation awareness in the nearby communities. Nevertheless, capacity building, vocational training and income generating activities also greatly contribute to raising public awareness. All programs and management is handled by people from local communities.

The buffer-zone program is considered to be an effective solution to wildlife crimes. The government shares 50% of park revenue with buffer zone communities, with the expectation that communities will aid in defense of the core zone (park) from poachers and intruders. In Chitwan, the buffer zone management committee receives nearly Rs30 million annually. However, research reveals that out of 37 VDCs, 96% have failed when considering that buffer zones were envisioned as alternatives for conservation in core zones. Only 4% of the VDC did not enter the core zone for fodder and firewood.

Awareness campaigns

Prior to the allocation of a government budget, partner organizations conducted several awareness raising programs and campaigns targeting local people. Through such programs, youths, ethnic groups, women and backward communities have contributed, ultimately supporting conservation and control of illegal activities like poaching and illegal trade.

Awareness alone is not sufficient to induce communities toward wildlife protection. There is no alternative to conservation, but alternative livelihoods exist to operate on the ground. Awareness campaigns and procedures should be modified with Research and Development to achieve maximum conservation. Relations between park-people and the park-army should be harmonized for smooth functioning and synchronization between bureaucratic and community participatory systems.

The poaching and illegal trade cases were politicized and protected from within the upper echelons of political circles, according to the district level staff. Conservation organizations are also politically influenced. Conservation awareness and commitments are not adequately spread-out within political circles - ranging from community to policy-making levels. Individual interests determine, to a large extent, conservation interests.

Government Resources

The practical approach to stop illegal trade in wildlife items would be to tighten borders, establish intelligence and patrolling systems, and launch public awareness campaigns. Poaching and illegal trade in wildlife was also not of high priority to the government. Resources made available for anti-poaching activities are meager.

Insufficient resources have hindered anti-poaching activities within forest offices. Some offices have, however, shown notable successes. The District Forest Office of Chitwan, for example, had contributed to a large extent to apprehending poachers and smugglers, despite personal financial investment of staff for inquiries and other related costs. In 2008, the District Forest Office of Chitwan filed a total of 11 cases by apprehending 14 poachers.

In some cases, the government system is helpless in controlling poaching. There are several reasons why forest administration has become so weak. One major contributor is direct political interference in forest administration. Organized structures are severely lacking in the forest administration. Promotion, incentives and facilities are also entirely based on personal approach and contacts. Some forest staff is directly or indirectly involved in poaching activities. Requests by poachers and bribes, patrolling was either suspended or diverted elsewhere to avoid any possible encounters with poachers. There is also a tendency to direct cases of poaching away from park to forest officials.

Donor programs should focus on national priority and interest. Their program should primarily target underprivileged areas. Their program should focus on public awareness and capacity building of anti-poaching activities. WWF's support to the district forest office had helped raise as much as Rs six million revenue in 2008 in Darchula.

Susceptible locations for poaching and illegal trade

Susceptible locations for poaching and illegal trade can be identified based on past events and potential areas of wildlife populations (Figure 5). Poachers take advantage of animal behavior, habitat conditions and surveillance gaps for targeting animals for poaching. It is unfortunate that some areas mentioned do not get equal priority in surveillance and coverage due to managerial constraints.

In Chitwan, the prime areas for poaching are, Siddhi, Korak, Shaktikhori, Naya Padampur and Piple. By December 2008, there were seven cases of poaching & illegal trade awaiting verdict at the Chitwan DFO. According to forest officials, routes used by smugglers are the Churia hills in India, Tanakpur, Jim Corbett, Haldwani and Pithoragarh. The tribal group ,Kunchkaniya, has been found to be agents for transferring the items. Smugglers also use vehicles belonging to security forces as well as taxis and private cars to fetch items from Dharchula in India (across Darchula). Smugglers then cross the Mahakali river, using steel ropes, and finally pass over to China via Rapla, Dublik and Bias. The two major groups involved in the process are the Sauka tribes of Darchula, and Gurjar tribe of India.



Exit and entry points

Exact entry and exit points for illegal trade in and around the park have not been identified. However, it is reported that mega-mammals killed in the park are transported to Kathmandu via Bharatpur. Animals poached are taken to nearby settlements used as potential hideouts for poachers and initial storage points for wildlife products. Exchanges may take place in those villages in order to transfer products to other destinations through the involvement of local people.

First hand information on wildlife crime is found at the ground level. The technology and manpower made available for investigations is not adequate. Park personnel are rarely trained. Their strength comes from high motivation and commitment.

The trans-boundary meetings are irregular and difficult to arrange. Wildlife crime, especially illegal trade in wildlife parts, is not only a national issue.

Wild animal parts are used to produce Chinese Oriental medicines. China Chapter is important while dealing with poaching and illegal trade in wildlife. Organizations such as NTNC have good relations with Chinese organizations. China should be receptive to collaborations seeing that poaching also affects them.

Legal actions

There are loopholes in existing laws. The chief warden has authority of quasi-judicial power. However, none of the chief wardens are fully trained in exercising such quasi-judicial power.

In spite of the fifth amendment of the 1973 NPWC Act, it is felt another amendment is required. The penalty of imprisonment of between 5 to 15 years is high.

There is no differentiation between intentions to kill and unsuccessful attempts to kill. This leaves a wide range of discretionary power, or personal judgment based on past records of the culprit. There has been mention of Rs50,000 reward to persons helping to track and arrest perpetrators, but these have not been implemented due to bureaucratic issues.

There is no flaw as such in the laws pertaining to forests and wildlife conservation. The problem is in implementation. There is a dilemma in handling the cases of forest offenses. For example, in 2008, the district forest office of Kailali had filed a case against four individuals who were arrested with tiger bones and skins. Later the appellate court ordered to free them by demanding bail of Rs28,000.

There is also the issue of taking responsibility for poaching incidents whether inside and outside the park boundary. Wardens have been known to follow suspects all the way from Chitwan to Kathmandu. These actions are considered illegal unless the local district forest officer would be willing to fully cooperate with them (warden and his staff) on filing legal cases against culprits.

A strong intelligence system needs to be developed at the national level, such as exists in India's Wildlife Crime Bureau.

Impunity and Implementation constraints

When a poacher is caught in or around PAs, wardens are asked to settle the case quickly, within the park premises. When the poacher or trader has links to individuals with high political positions, senior officials from ministries, departments and other authorities pressurize wardens/DFOs to dismiss the case or minimize punishment. For example, in 2005/06 BS a car with 5 rhino horns was caught in Aanp Tari in CNP territory through the information of informants. The car and horns were sent to army HQ Kathmandu by a colonel in Chitwan. It was illegal to deal in such case by other authorities without the permission of wardens or DFOs. Later on 5 people from Sindhupalchok along with the vehicle and horns were sent to Chitwan DFO Office. The offenders were released on bail of Rs50,000 each by the then DFO due to pressure from then forest minister. It later surfaced that the vehicle belonged to the then king's aide-de-camp.

Park authorities become discouraged and de-motivated when their decisions are reversed. In 2008, twenty-five poachers from Chitwan and four from Bardia were released. In fact, they were sent to jail by the park

authority for three to fifteen years. Instead the Chief Warden and his subordinates were taken into custody for over 10 months.

CITES Implementation

The issue of wildlife is not of central concern to the forestry department, whose focus is on other forestry issues. The DNPWC is faced with gaps in staff numbers and capacity constraints to curbing poaching and trade. The department has not been able to lead and coordinate partner agencies in the CITES implementation. As a partner of CITES implementation the police force needs to be integrated, with solid responsibilities and well defined duties on wildlife issues. Political instability has delayed passing of CITES bill in parliament. The customs department lacks manpower and capacity to implement CITES.

CITES implementation had been frequently referred to by protected area managers as well as protection units and customs. Nepal became a member of CITES as early as 1975. Efforts have been made to formulate CITES implementation act since 1998. There had been suggestions to amend the sum for poaching fines.

NGO Efforts

Some NGOs and community organizations are making great effort in tracking illegal activities and arresting poachers and traders. However, their role is limited due to policy constraints, since they are not authorized to arrest poachers and traders. Except for wardens, no other personnel are authorized to warrant arrests. The site-specific procedures also constrain the effectiveness when groups are absent of Park personnel and, particularly, wardens. Offenders receive bail easily from the courts in the absence of sufficient evidence. The deployment of staff in PAs based on working efficiency, interest, experience and capability is not taken into consideration.

Policy and legal issues

Policy for controlling poaching and illegal trade in wildlife and their parts does not match with practices. Staff posts and available human resources is one major example. The resources required for effective operation in curbing poaching and illegal trade are far higher than available resources – both financial and technical. The loopholes seen in legal issues regarding punishments and penalties to offenders are also problematic.

Policy formulation requires the inclusion of new dynamics of participatory conservation and clarification with clear rights and obligations among local organizations such as BZMC, BZUCs, and NGOs. An autonomous status for protected area systems will be more effective in wildlife conservation and management without complex bureaucratic impediments.

From the perspective of protection, the protected areas should be sealed so that no activity such as grass cutting, firewood collection and, eventually, poaching can be carried out within park borders. However, this would be difficult in the buffer zones since prevailing buffer zone laws are weak.

According to the protection unit personnel, mass awareness is equally important. The public have, at times, been misinformed especially about wildlife parts confiscated from poachers and smugglers. There has been the misconception that the army and then royal family used to collect wildlife parts as well as consume bush meat. However, confiscated items were sent to park headquarters, such as Kasara in Chitwan, where such items were destroyed or preserved as per policy.

Wildlife poaching cases in PAs were drastically reduced after the restoration of democracy in 1990. Before 1990, wildlife products obtained through confiscation or mortality were sent to the Royal Palace. This process was officially stopped after 1990.

There could be indirect links between tourism and poaching/illegal trade. Occasionally, hotels are considered as a meeting place for poachers and smugglers. On the other hand, tourism is directly related to local and national economic prosperity.

Protection units training courses have included topics such as wildlife conservation, biodiversity and legal formalities. However, there is no wildlife expert in the army.

According to the protection unit (Nepal Army), there is a need of tighten security systems - since poaching is increasing at an alarming rate. Coordination between the civil administration of government and the army is extremely important.

The protection units have taken steps to modernize the intelligence system by introducing sniffer dogs to track down illegal traders. In the initial stages, four dogs have been considered adequate.

The international and national nongovernmental organizations play a crucial role. The media is also instrumental, however, at times, media coverage has not been entirely accurate and well informed.

There are several units working independently and in isolation. It is necessary to draw attention to the judiciary system, since this is the level where punishment is decided.

4.3 Actors involved in Poaching and Illegal Trade

Reports from Chitwan show the involvement of locals in most instances of poaching. The majority of poachers belong to local ethnic groups with poor economic condition. Almost all poachers convicted have reported their involvement due to the easy money obtained from poaching. In many cases the convicts released are again caught for poaching. Local poachers in some cases, involve family members. Three or four members of the same family have been found to be involved in poaching and illegal trade cases in Chitwan. In other cases, poachers from Indian communities were caught. Sometimes, wanderers such as the Bawarias, an Indian Tribal community, have been reported for poaching and illegal trade in wildlife in Nepal. The majority of individuals caught for involvement in illegal trade, are from other areas, particularly those having connections with Tibet and India. Sometimes, smugglers are high profile individuals – for example, a pilot as well as a politician with a ministerial position, have been caught. Politicians, government white collar individuals and elites are often involved in illegal trade. In a few cases, persons such as Park personnel and local conservation community members have been found to be involved in illegal trade and poaching.

According to forest officials, the district of Darchula was noted for illegal trade in wildlife parts. Usually three groups of individuals are involved in the activities. The first group consists of people residing near forests who kill wildlife in revenge. Wildlife depredation was a major cause of revenge. The second group consists of elites and rich people who collect wildlife parts as souvenirs. The third group is poachers and their networks – including those who kill wildlife, transport wildlife parts, and finally those who sell to buyers. The items that were passed through Darchula to China included leopard bones and pelts, bear bile, snakes, otter skin and fur, turtles etc. Also, the items that were smuggled from China included satoosh, musk pods, drugs etc. which are believed to reach Kashmir via Delhi. So far, there have been no incidents involving rhino-horn in Darchula.

Generally, women culprits are not arrested on humanitarian grounds, unless there are unavoidable circumstances. Poachers thus capitalize on these systemic weaknesses, involving their wives in poaching activities.

Although the parks utilize participatory conservation strategies throughout, these have not been popular among locals. The legacy of elite control of parks and the related difficulties for locals has not faded from memory. Domination by bureaucrats and subsequent stigmas over issues of power are still strong in these locales.

In the past, wild meat has historically been supplied to locals, a practice which is presumed to continue, despite the fact that parks have protected status. Several poaching cases were also reported from areas near security posts. Such incidents have made the local people suspicious of the security arrangements themselves.

Power and influence is commonly used to release suspects involved in poaching and illegal trade in cases where offenders have political affiliations. On the other hand, penalties for other offenders are not comparable – since punishment is often extremely stiff.

Box 1. Jail inmates

There were 243 jail inmates as per the record of 2065.9.12. Of the total inmates 108 were related to rhino poaching and trade (107 Male and 1 Female), 3 were related to tiger poaching and trade. The offenders in rhino cases (55 convicted prisoners and 52 imprisoned suspects were male and 1 imprisoned female constitute the largest portion (44%) of inmates in jail. The large number of imprisoned suspects indicates delay in decision of penalties for offences.

Three jail inmates namely- Bir Bahadur Praja (43), Rajkumar Chepang (25) and Ram Chamdra Chepang (57) in custody for involvement in poaching cases, were interviewed. All the inmates expressed grave concern over the maximum punishments of Rs100,000 and 15 years jail sentence. Rajkumar Chepang was worried about the situation of his own brother - who had been in custody for three years but whose sentence was still undecided. He pointed out issues of efficiency, rule of law and government (Park authority) accountability for the pending case. He also admitted that the park authority refused to release appeal of appellate court showing his involvement in other cases too and he was continuing his prison term. All inmates interviewed were of the opinion that their involvement was due to lack of knowledge as well as the financial reward. All inmates enquired about the whereabouts of those who took the wildlife products. All also commented on the fact that park authorities constantly trouble the local poor on the forest edge whilst allowing high level traders to roam free - even given the fact that their particulars and whereabouts are known to authorities.

There are communities in and around protected areas where at least one member of a family is either in jail for wildlife crimes or absconding. In a community, choosing wildlife crime as a profession is not seen as unethical. In Chitwan, there were 500 poaching cases. Between 20,000 and 25,000 persons are suspected to be involved in wildlife crimes in Bara, Parsa, Makwanpur, Palpa, Nawalparasi (Balmiki Nagar). In Chitwan, during a period of three and a half months during 2006, 250 poachers were arrested of whom 180 were later released, and over 150 were absconding.

Crime is defined by law. There is no room for commonsense and sympathy. Whether criminal are rich or poor, they face the same legal system. In wildlife crimes, involvement is not only of the poor, but also of high profile and rich people. There is a greater chance of counter attack in cases where high profile individuals are targeted. Such crimes are well organized among poachers and smugglers.

Box 2. Silent partners

Government offices in neighboring districts attached to a national park are markets for poachers to sell their products. For example, poachers who kill wildlife in Bardia National Park used to take fresh meat to Surkhet. According to their explanations to the judiciary, reliable consumers were hotels and restaurants as well as government offices in Surkhet. Buyers pay high rates for bush meat. Rich elites such as political leaders, government officers, merchants and journalists were said to purchase bush meat - either fresh or dried. This claim is further backed up by the fact that Kathmandu guests demand bush meat in local hotels and restaurants in Thakurdwara.

Box 3. Chepang communities (Manahari VDC, Makawanpur)

The Chepang and other communities residing in Handikhola, Manahari, Raksirang and the surrounding hills were found to be involved in illegal activities in the Chitwan National Park. With the introduction of alternative opportunities for livelihood, they have gradually given up these illegal activities. From the case studies of the residents in those areas, it has become apparent that their attention had been diverted to cash crop cultivation, such as bananas.

In Polaghari settlements of Manahari VDC, Mrs Rammaya Chepang had planted 200 banana plants in 2004, and by 2008 she had already 2000 plants. She was going to increase the number by another 200 plants in 2009. During high season (September through November), she earned Rs2000 monthly from banana alone. She expressed that the khorla land looked much beautiful with the green plants of banana. She also expressed that her family members do not have to enter the national park to gather yams, wild fruits for living.

The Masine Community Forest User Group was also attached to the Ujjwal Bhabisya Buffer Zone Committee of the Parsa Wildlife Reserve. They were 13 member committee and 531 households as general members. They all belonged to the ward 7 of the Handikhola VDC. Mr Ram Bahadur Moktan had established horticulture farm of 125 lemon trees, 200 banana plants, 50 mango trees and others in 2004. He learned the ideas from friends and neighbors.

5. Conclusions, Recommendations and Action Plan

5.1 Conclusions

5.1.1 Management and Protection of Wildlife

The basic principle of conservation should be to ensure biological growth rate of species like rhinoceros and tigers. These rates should exceed mortality rates. It is essential to explore methods of minimizing poaching whilst, at the same time, increasing biological growth of the species. There are a number of questions pertinent to sex ratio, habitat condition, mortality of breeders and so on. Activities like rhinoceros counting and tiger census might provide some answers to these questions.

Biological management is another issue to be addressed. The current status of wildlife habitats is worrying. One major reason why rhinoceros stray from parks is the degradation of habitats within the parks. It is necessary to generate comparative data along with tracking/monitoring systems. Conservation efforts should attempt to return ecosystems to their natural balance.

According to the scientists and conservationists, the level of knowledge among managers and experts need to be updated. It is not necessary to panic over the low population of rhinoceros. The remaining 100 rhinoceros are not similar. They have different heat cycles and age-groups. Almost 13% of the population consists of babies who will become adults and mothers and maintain the population. However, some individuals may be ill with disease and malnutrition, and some may also abort.

The park management officials have also realized that the general courses that wildlife rangers and officers have studied does not cover much on the legal formalities of handling wildlife cases.

Wildlife counting efforts such as Rhino Count, tiger census etc has been misinterpreted. Journalists join in these counts and make claims as if they were experts. Population biology of tiger and rhinoceros were grossly misinterpreted by management. In terms of knowledge, park managers have been found to be severely lacking, although diligent in their work.

According to conservation scientists, mega-species such as tiger and rhinoceros do not become extinct due to poaching alone. Many factors affect wildlife populations. The effect of poaching and the frequency of its occurrence are much exaggerated by both government and nongovernmental officials. However, rhinoceros poaching will not be stopped completely even in the year 2020. As long as there is demand for oriental medicine - prepared from wildlife products like rhinoceros horns, poaching will continue. Oriental medicine is a billion dollar industry in US cities. Chinese tiger farming approach might be theoretically correct, but in practice it would be difficult to differentiate between products received from the wild and from farms.

Rhinoceros translocation from Chitwan National Park to the Babai valley of Bardia National Park is a good example. The international organization, WWF, was a key player in the rhinoceros translocation. The national body, NTNC was also involved in the operation. The Nepalese conservation community has concurred that major activities like rhino translocation should be critically scrutinized from the poaching perspective.

During the course of interactions and consultations with the study team members, several conservation scientists had expressed critical remarks on the activities of the DNPWC, BZ communities, NTNC and WWF. They expressed their dissatisfaction that the organizations were inclined more towards populist activities rather than in serious conservation efforts such as identifying management gaps in the species and their habitats. They also pointed out that Nepalese organizations criticize their own programs.

Forensic Tests

Most of the specimens brought for forensic tests were animals including fish and mammals. Only a few cases were recorded for birds. In 2006, samples of fish skins that were confiscated in Tatopani customs, were brought for tests. They were found to be marine species. It was noticed that oil from these fish is used for the treatment of gout.

In the case of mammals, samples of rhinoceros horns were brought for tests, and most of them were found to be fake. Nearly 80 rhinoceros horns were received at the National Forensic Science Laboratory at Khumaltar, Lalitpur for tests, and only three (two adults and one baby) turned out to be genuine. An adult rhinoceros horn weighs about 1.3 to 1.4 kgs (original). Traders have devised several methods in making fake items seem natural. A piece of magnet was used in one sample, and plaster of Paris was found in another. Fake horns were generally made of cattle horn, wood or rubber.

Confirmatory sampling tests the morphology, anatomy, chemicals, whereas DNA testing identifies genetic structures, linking these to species. Generally, blood, bone or flesh was tested for DNA. On average, it takes one to two hours to identify rhinoceros horn using confirmatory tests. Generally the microscopic characters were checked for specific structures, natural designs. Thereafter, anatomical structures were scanned and studied. In the morphological tests, rhinoceros horns were cut into pieces and even powdered. Rhinoceros horns may be destroyed if chemicals or fire are used in testing.

Almost all the musk-pods brought for testing at the laboratory were found to be genuine. Other items that were received for laboratory testing were Shatoos and bear bile.

Scientists working in the laboratory have received brief training from Wildlife Institute of India, Dehradun, India in 2006. The training package was reasonably successful. Recently, the Indian government had started DNA testing on wildlife samples. However, the traditional confirmatory test method at the National Forensic Laboratory of Nepal is also satisfactory.

Intelligence

An intelligence network of six to seven individuals existed in the Shuklaphanta as in the other protected areas. The anti-poaching unit acted according to information received by the intelligence network. This led to the successful arrest of the poachers/smugglers and the individuals involved in providing the information leading to capture, were rewarded. However, their names had not been disclosed to the public for security reasons.

There are 15 guard posts in the Shuklaphanta and each is manned by only two persons, although the requirement is four. The number of field staff is 51, which has continued from the time of 144 sq km area. Despite the reserve area having been extended by more than double its area, to 305 sq km, the number of staff had remained the same. A financial shortage is the main obstacles in organizing anti-poaching units in the reserve.

Chitwan has a strong intelligence system (anti-poaching units) to curb poaching and trading of wildlife. The APUs operate under the guidance of the Chief Warden - both inside and outside the park. The Nepal Army and CNP personnel patrol regularly. Park personnel have therefore worked in close cooperation with members of APUs in nearby communities and informants to locate poachers and traders. It is clear from records that many cases of seizures and capture of poachers and wildlife dealers occur due to information from informants in the communities outside the park area. The district forest offices of Chitwan, Nawalparasi and Makwanpur are partners in their efforts to curb wildlife poaching and illegal trade in wildlife products in the Chitwan area.

The park also set up a network of informants outside the park area. The informants monitor the mobility of the people visiting the village area as well as local people suspected of involvement. Suspicious activities are reported to the park. When evidence of poaching and trade are obtained, action is taken to contain groups and individuals involved. Local people are also educated in how to treat suspects and steps taken in informing park authorities about events and incidents. Park personnel trace suspects through information from informants, even in districts not adjoining the park.

There is a monitoring unit under the leadership of the Assistant Forest Officer. At times, the team had raided houses. Almost all the major entry/exit points are vulnerable to poaching and illegal trade. Locations at Dodhara and Chandani are frequented by Indian poachers.

Managerial actions

The main method of controlling poaching and illegal trade (in PAs) is through strengthening Park personnel capacity. Awareness activities and the involvement of local informants also contribute greatly to initiatives against poaching and illegal trade.

Field-level public awareness programs are organized by NP through local NGOs, community groups (BZUCs and BZUGs), school programs and women groups through mechanisms such as informal interactions, discussions and meetings. Most programs are supported by organizations working in the conservation sectors.

Presently, community groups are involved in anti-poaching activities through awareness raising and patrols with NA and Park personnel in LNP. There are eight recently established, community anti-poaching units in BZ VDCs (6-APUs and 2-snowleopard conservation sub-committees) under the cooperation of LNP and LNP & BZ Support Project (WWF Nepal Program). Local APUs (groups of local youths) are involved in conservation awareness with the purpose of safeguarding biodiversity in LNP. APUs patrol the BZ area and are involved in patrolling with Park personnel and NA.

Interest shown by the local community members in anti-poaching activities is commendable. However, there is no response or alerting mechanisms in place.

Legislative Actions

Acts and Regulations on wildlife poaching and illegal trade are solid (albeit needing some revisions) if well implemented. There are several barriers in the enforcement and implementation of laws on wildlife protection. For example, sensitivity of poaching cases change and become truncated when it reaches the court (judicial system) from the quasi-judicial system of the park warden. When a poacher or smuggler is caught in the jungle, in the absence of local evidence, in court, the convict is freed, showing the case of absence of Primary Muchulaka (must be made in front of public and impossible when the event occurs).

The roles of the army in PAs should be clearly defined with revisions to existing acts as well as the formulation of new acts and regulations.

Accountability

The PA personnel play instrumental roles in controlling poaching and illegal trade. They are mobilized when required (even the administrative staff join in patrolling activities). To make PA personnel more dedicated to their duty, they must be well trained and provided with financial incentives and security during field operations.

In LNP, the preventive system consists of patrolling by Park personnel and army. Networking, training, financial incentives and security are not well organized, although essential. The effectiveness of the legal system is good but preventive activities are not in operation to their fullest extent. Capacity building, incentives and alternatives are the most effective means to control poaching and illegal trade.

Mobile anti-poaching units' are stationed inside the park. Their main activity is to control trade and poaching of wildlife in the park. Vehicles passing through the park (to and from Madi) are frequently inspected. Vehicles are checked at entry and exit points of the park. Movement of vehicles and people is regulated by enforcing strict time limits for entrance and exit from the park. The time limit has contributed to the effective monitoring of vehicles and people moving through the park. This has proved a major deterrent to traders in wildlife and wildlife derivatives.

The major activity in and around Chitwan has centered on curbing poaching –in particular, rhino and tiger poaching, rather than on controlling trade. However, there is no established illegal trade control mechanism outside the park, thus personnel and informants fill this role. Seizures of wildlife and wildlife parts have been initiated, primarily, by the park.

Considering the seriousness of rhino poaching in the Rapti valley, district forest offices have joined hands with the Chitwan national park authorities. In the early 1990s, several coordination meetings were organized and joint patrolling teams were formed.

5.1.2 System and Ways of Poaching and Illegal Trade

Poaching trends and status

Rhinoceros were poached in the Terai, even before conservation started. There exists no database on poaching intensity and numbers that result in death, but evidences shows a large number. A number of pits were seen in CNP, even after start of its protection. In the past, rhinos trapped in pits were buried after horns were removed, thus allowing some cases of poaching to go unnoticed. Upon enquiries about the purposes of digging pits by Park personnel, poachers would often escape punishment by claiming to be digging for wild tubers. Rhino poaching was well controlled in Chitwan for a few years after the establishment of the park and deployment of forest guards and later the army. Cases of Rhino poaching dramatically increased during 1992 and reached a peak in 2002. Cases remained high during the period of conflict.

Tigers were targeted by poachers for their hides in the 1970s. Tiger bone became a popular trade item later. The first case of tiger bone trade in Nepal was unveiled in Darchula in 1999 by the District Forest Office. In the past, tigers were killed mostly by poisoning and sometimes trapping. Later on, shooting of tigers became the preferred method. This had a devastating effect on conservation.

The poaching of wild animals such as leopard, tiger, rhino, bear and musk deer is on the rise. With this current trend of poaching- tiger and bear may become extinct in the wild.

Prior to the political changes of 1990, all confiscated wild animals and parts were sent to the Royal Palace. Since then, these items have been stored in the Tikauli center of the armed forest guards.

Formation of poaching and illegal trade network

Based on experience from previous incidents, it is clear that networks of poaching illegal trade are strong and secretly and efficiently maintained. Several networks are believed to exist in poaching and illegal trade in wildlife and wildlife parts. Little is known about networks at upper levels. However, it is assumed to constitute of high profile criminals with international linkages. As previously mentioned, little is known about the dealings of poaching syndicates, however, based on the testimonies of guilty persons as well as on experience, it is known that locals are used to shoot or trap animals and then pass on the derivatives to local dealers at local village or towns nearby. Items are then transported to Kathmandu or border areas (Tibet) where businessmen get involved. The exact destination of rhino horn remains unclear. Indian criminal networks have been reported involved in poaching and illegal trade in Chitwan.

Poaching susceptibility is based on the easy availability of wildlife and/ or security gaps due to remoteness or distant security posts. Major susceptible areas for poaching in LNP are Langtang, Polangpati, Yangdi, Kyanjin, Thadepati, and Panch Pokhari - due to abundant wildlife populations. Kyanjin and Polangpati areas have large populations and suitable habitats for Musk deer - a target animal for poachers. Parts of the park such as remote areas and areas not backed up by army are more prone to poaching. The main entry and exit points for wildlife trade are Rasuwa Gadhi-Kerung, Sertung-Tiplang (outside LNP-border Dhading), Gumbathang and Panchpokhari.

Methods and mechanisms

Key actors in poaching and illegal trade in wildlife and their parts range from local groups/individuals, right up to the national- where products sold in international market. In LNP poaching of wild boar, Ghoral, Jharal and birds for meat is undertaken and products end up in the locality. A network for poaching and illegal trade in musk deer exists. Poachers operating on the ground, come mostly from adjoining districts (mainly from Dhading) and have connections with local dealers (in district HQ or other parts near). The poachers visit wildlife areas as guests of locals or as laborers (workers) in the area to locate and gain information about the target species. The duration of this process can span from a few days up to a couple of weeks. Traps are laid in the forest secretly and the area is surveyed for trapped animals. When animals are trapped, musk pod is removed. The poachers then transfer the product to local dealers. Local dealers arrange to pass the product on to dealers in Kathmandu - mostly by land transport or on foot.

Local dealers are not involved in transporting products. The products then reach dealers in Kathmandu and are shifted into the international market by other high profile (international) dealers, either by air or land.

Proof of involvement of political leaders and other such professional groups in poaching and illegal trade networks is not certain or well publicized. Poaching and illegal trade networks are dynamic. Until recently, networks have followed a clear process and have been fully dependent on face to face interactions at each step : (poachers→ local dealers→ carriers (transport) →dealers in Kathmandu→ to outside dealers) In recent times, however, network have been strengthened and made easier by modern communications—particularly the internet.

Middlemen brokers are active in Kathmandu, Hetauda, Chitwan, Pokhara, Butwal, Treveni (Nawalparasi). Sometimes, diplomatic personnel have been found to be abusing their special privileges by carrying rhino horn and other illegal items. A notable example is the case of the pro-conservation individual, Ian Becker, who collected hundreds of wildlife parts that was stored and decorated a house in Kathmandu.

Protected area personnel are threatened by poachers/smugglers. During armed conflicts, park personnel have been killed in ambush in Parsa and Shuklaphanta wildlife reserves in 2005. Park scouts lose motivation during such incidents and are only willing to carry out regular patrolling with the help of army. Sometime this army support has created conflicts over who should command the joint patrol unit. Once, there was a dispute with a high level officer about this issue. A colonel ordered the imprisonment of a warden and barred the warden from entering the park.

Blackmailing is another type of threat used against lawyers, civil society and forest officers.

Wildlife crime involves a complex network. There is no point in blaming local communities for such crimes. It is more appropriate to strengthen institutional and community capacity through specialized training.

In 1996 a trader was caught having killed seven rhinoceros in Bardia. He was local dweller from a Gurung community. In general, involvement of top-level persons was found in the illegal trade in animal parts. Such top-level traders are mainly from Tibet. Since they have dual/trio citizenship certificates, it is difficult to specify their status.

5.1.3 Effectiveness of Policies and Institutions in Poaching and Illegal Trade

Effectiveness of Policies

In respect to CITES implementation, the favorable factors are:

- Nepal is a signatory to CITES and other international conventions pertinent to biodiversity conservation,
- Government of Nepal has adopted and implemented various policies, acts and rules to protect the endangered species,
- There is a nation wide organizational structure of protected areas and forests,
- Government's conservation efforts were complemented by the conservation partner organizations and the local people.

The following issues of CITES implementation have yet to be addressed:

- CITES bill has not been approved due to prevailing political situation,
- In the absence of separate CITES Act and Regulations, the conservation activities governed by NPWC Act and other existing laws and regulations were inadequate,
- Political influences were strong, and prosecution had become virtually impossible,
- Poaching and illegal trade are still happening despite the government policies such as buffer zone,
- Most smugglers were found to be associated with political parties which become active to protect them,
- Often poaching events were conveniently sequenced to major political upheaval,
- There was a lack of coordination efforts and proper communication between Nepal, India and China regarding illegal trade.

- Coordination with varied organizations was a major challenge for DNPWC whose expertise was mainly to manage the protected areas and protect wildlife,
- The judiciary acted swiftly in seizure cases in Nepal, but the penalties were either insignificant or non-existent.

In respect to the Forests and Wildlife Related Laws, the favorable factors are:

- The 1973 NPWC Act (Section 3) categorically prohibits hunting of animals or birds, protects the 39 species of wildlife, complements the 1993 Forest Act to prohibit hunting in national forests, and has been amended five times.
- The 1996 Conservation Area Management Regulations – CAMR provides the rights and duties of the CAMCs, and authorizes the judicial authorities to the liaison officer designated by the DNPWC and/or MFSC.
- The 2001 Conservation Area Government Management Regulations - CAGMR provides the local people with the traditional right of hunting wild animals as per quota and designated place.
- The 1995 Buffer Zone (Management) Regulations (BZMR) restrict hunting wildlife.
- There is a legal provision of Rs50,000 reward to the person who help track and arrest a poacher/smuggler.

The following issues need to be addressed:

- The 1993 Forest Act does not explicitly define wildlife as forest products.
- The 1995 BZMR provides licensed hunting of animals other than the endangered species, and does not address the issues of poaching and illegal trade in wildlife.
- Nobody has received any reward due to long paper work and procedure.

The favorable factors pertinent to Policy, Strategies and Plans are:

- The 1988 NCS has recommended for CITES legislation,
- The 1989 Master Plan for the Forestry Sector recognizes conservation of ecosystems and genetic resources as a primary program.
- The 1993 NEPAP mentions the CITES Appendices, and recommends legal and regulatory measures to control illegal trade wildlife.
- The 2000 Revised Forest Policy, and the 2002 NBS highlight on the participatory approach in wildlife conservation.
- Wildlife farming policy encourages for commercial farming of the selected wildlife species
- Hunting and trading of elephant have been prohibited and regulated.
- Species action plans for tiger, snow leopard, rhinoceros and elephant have been prepared (Brief details are given in the **Chapter 3.1 Review**).

The following issues pertinent to Policy, Strategies and Plans need to be addressed:

- The 1988 NCS was more concerned with the illegal trade in valuable plant species and, to a lesser degree of wildlife products.
- The Environmental Protection Council has been inactive to implement NEPAP since its endorsement in 1993.

The following administrative measures have been taken by the government:

- As required by the Article IX(1) of the CITES, the Government of Nepal has designated the CITES Authorities as follows:
 - Management Authority for fauna: Department of National Park and Wildlife Conservation, Babar Mahal, Kathmandu.
 - Management Authority for flora: Department of Forest, Babar Mahal, Kathmandu.
 - Scientific Authority for fauna: Natural History Museum, Swoyambhu, Kathmandu.
 - Scientific Authority for flora: Department of Plant Resources, Thapathali, Kathmandu.
- Provisions have been made to house CITES cells DNPWC, DoF, NHM and DPR.
- Rangers have been posted at some customs points in Terai for examining consignments containing wild fauna and flora.

- Three transboundary meetings were held to control illegal trade in wildlife.

The following actions need to be undertaken:

- Transboundary meetings have been discontinued since 2002.
- Officials at the CITES authorities are not updated because of their frequent transfer.

Effectiveness of Institutions

The existing system of investigation and intelligence cover the following aspects:

- The forest/wildlife sector has a long track history of antipoaching operations even before the protected areas were established.
- DNPWC has an established and functional organization from the center to the fields.
- The lowland protected areas have comparative advantage of hattisaes.
- Nepal Army has deployed sizeable strength of protection units in the protected areas.
- Officials with Nepalese Customs, Immigration and Police had some jurisdiction over wildlife trade.
- With the coordinated efforts of the agencies and the informants, the Government of Nepal had arrested a number of poachers and traffickers. With the coordinated efforts of the several agencies including the informants, a number of sizeable seizures have been made.
- WWF Nepal Program and International Trust for Nature Conservation (ITNC) have supported antipoaching operations.
- NTNC had played significant roles in antipoaching. Its initiatives include conducting workshops for army personnel, establishing an endowment fund of Rs50,000, plan to introduce sniffer dogs, help NA create a special antipoaching squad and others.
- Authorities of several government bodies such as custom, immigration and police are aware of the CITES implementation for which their coordinated and joint efforts are essential.

The following issues of investigation and intelligence need to be addressed:

- Number of Hattisaes (domesticated elephants stables) has declined recently, since there was no replacement to the posts that were vacant after retirements.
- Poor coordination and gaps in communication among the institutions of custom, emigration and police had indirectly contributed for illegal wildlife trade.
- Organized poachers knew anti-poaching operations in Chitwan, including informants, collaborators and their vulnerability.
- The government records on wildlife activity poorly documented.
- Park game scouts were not armed, and army patrolling was limited to protected areas.
- The antipoaching units were short of vehicles and other equipment..
- Nearly 60% of the poachers used to escape leaving their weapons, and only 50% of raids were successful in arresting smugglers.

The present strengths of the quasi-judicial system are:

- NPWC and Forest Acts give discretionary power to Chief Warden and DFO respectively.
- Normally women culprits were not arrested on humanitarian ground, unless there were unavoidable circumstances.
- The judges were also invited to the parks for orientation on wildlife conservation.

The following issues on quasi-judicial system need to be addressed:

- Notorious poachers have engaged their wives in the illegal cases as shields.
- Quasi-judicial system of park was not rational from the perspectives of the human rights and judicial ethics.
- The park staff, DFOs and army were not trained about the legal issues of quasi-judiciary system and its dynamics.
- The warden's discretionary power for deciding maximum penalties for offenders in many cases seemed rather unusual.

- Quasi-judicial decisions were delayed for a long time, and punishments did not reflect the degree of involvement in illegal activities.

The strengths of the present protection and intelligence system include the following aspects:

- The Nepal Army and the Nepal Police play vital roles in wildlife protection in protected areas and elsewhere.
- The army and police back up the civil administration in wildlife protection.
- Annual budget allocated to the army deployed in the protected areas is nearly 80% of the total budget set aside for the national park sector.
- The presence of army in the PAs serves as a strong psychological deterrent to poachers and illegal dealers in wildlife and their products.
- Guard posts were reviewed and reinstated at vantage locations in the post conflict period.
- Community based antipoaching operations involving local youths were launched.

The current issues that need to be addressed are:

- Mere presence of army is not sufficient to control poaching in the present context.
- Army, police and civil authorities occasionally clash over personal egos.
- The army and police personnel are not updated with ideas thinking wildlife protection.
- The Nepal Army and the Nepal Police do not have wildlife experts.
- Proliferation of arms from conflict was also a major cause of increased poaching, because conflict had created situations like:
 - regular patrolling by both army and civilian staff were reduced in temporal and spatial scales.
 - number of guard posts had been reduced.
 - deterioration of law and order in the country.
- Traditional methods of hunting and poaching become replaced by the new and powerful arms.
- The police was more involved in resolving social problems rather than in combating illegal trade.
- Poachers and their buyers were seldom brought to justice and convicted, and when they were, their sentences were unlikely to deter future poaching and illegal trade.

The encouraging factors of forensic capacity and depository are as follows:

- the National Forensic Science Laboratory (NAFOL) at Khumaltar, Lalitpur has developed capacity of conducting confirmatory tests of wildlife specimens like rhino horn.
- Prior to the 1990 political change, all the parts of wild animals found or confiscated were sent to the Royal Palace. Since the change, the items have been stored in the Tikauli center of armed forest guards.

The issues that need to be addressed are:

- NAFOL has limited facilities and resources.
- The confiscated wildlife items stored at the Tikauli center have started degrading due to weather.
- The general courses the park rangers and officers had studied in colleges did not cover on legal formalities of handling wildlife cases, nor the fields of wildlife biology.
- Most customs staff in was unfamiliar with the issues of poaching and illegal trade, although they have general knowledge on CITES. Customs officers deal in trade through legal routes. Illegal trade goes unnoticed to the customs.

The aspects of livelihood alternatives include the followings:

- Poverty was related to poaching and illegal trade in wildlife parts in and around the protected areas.
- The income generating activities: banana fruit cultivation, goat and fish farming in the neighboring VDCs of Handikhola, Manahari, Raksirang and Kankada have changed the behavior and attitudes of the local communities towards wildlife poaching.
- Locals have formed community APU that focused on conservation awareness campaigns, and joint patrolling with park scouts.

The issues pertaining to livelihood are:

- Poaching and illegal trade cases were not only related to wildlife conservation but also to economic, political and social aspects.
- In communities around protected areas, at least one member of a family was either in a jail for wildlife crime or absconding. In a certain community, wildlife crime was not criminal activity.
- Human wildlife conflicts were straying of wildlife in to agricultural land and human settlements causing damages to lives and properties.
- Compensations provided by park administration may not meet the demands of people for damages. Such situation rather provokes dissatisfaction.
- The community based APUs have felt a gap in terms of capacity building and finance although they receive some incentives.

Job priority among the government and nongovernment personnel are:

- The government entities like DNPWC, DoF and Custom Office are empowered by the legal provisions for wildlife protection.
- The personnel working in DNPWC and DoF have similar academic courses.
- Custom offices can employ forest personnel.
- The existence of mega species like rhino and tiger is important to justify the position of the conservation organizations like DNPWC, NA, NTNC and WWF, and the community based organizations like the BZMC.

The issues that need to be addressed are:

- DNPWC, DoF and Custom Office have divergent responsibilities towards wildlife.
- Anti-poaching squads have not been formed in urban areas.
- Formal coordination mechanism is not in place for information sharing between civil informants and army/police intelligence.
- Bureaucrats used to demand wildlife meat especially of wild boar or deer in Terai and Kathmandu.
- The government line agencies have their own sector priorities over wildlife conservation.
- In terms of budget allocation and human resource mobilization, anti-poaching and anti-illegal trade in wildlife were not a high priority of the government.
- Support from organizations like WWF and IUCN were not consistent and planned.
- Wildlife crime was not a high priority in the police

5.2 Recommendations

Recommendations to control poaching and illegal trade are:

Allocation of resources

Revenues raised from tourism and other activities in and around the parks are not used to the satisfaction of all stakeholders in a transparent and fair manner. This is causing resentment, grievances and dissatisfaction among them. In the last couple of years, Nepal has undergone a transformational change in politics: from feudalism to democracy to a republic, has been a great exercise of power which has raised high hopes and expectations. People are no longer interested in being passive recipients of 'favor from the top'. As a matter of right, they want to be involved and to participate in the management of activities that have a bearing on their everyday life. To address this problem, a participatory system of management and transparent sharing of resources needs to be developed and put in place immediately.

Adjudication of cases

Cases related to poaching and illegal trade in wildlife and their parts are decided, in the first place, by park wardens and DFO's, who, as per the prevailing popular perception, are not properly trained in the nuances of laws and intricacies of adjudication. To avoid risks and criticism, these officers hardly use any discretionary power vested by law unto them. Their decisions are mostly mechanical, stereotypical, devoid of discretion and judiciousness. They invariably award the longest imprisonment and highest fines to the accused which are mostly quashed or reversed by the appellate courts. To address these problems, these

officers who are very conversant and knowledgeable in their respective subjects and fields, need to be in the basics of laws, procedures and substantive aspects of adjudication.

Breaking Nexus

Poaching of mega species and illegal trade in their parts is a highly sophisticated enterprise which has a national, regional and international network. They need to be tackled at all levels in a systematic and appropriate fashion. To start with, action must begin at home. Poverty is definitely one of the causes but not the sole cause of poaching. Of course, informer, locater, shooter of wildlife and carrier of their parts at local level come from those who live on the fringes of or near parks. Like any other professional, they are fully aware of their acts and consequences emanating thereof. Nonetheless, these people are lured into poaching because they find the job comparatively less risky and higher paid. Moreover, they get political protection and patronage both at the local and national level. Their patrons are powerful enough to influence the government of Nepal who waive fines and imprisonment and free them long before they complete their terms and fulfill requirements. Lax enforcement of laws and a state of virtual impunity work as great incentives to poachers, smugglers and government and non-government accomplices in this nexus. To break this, strong laws and strict enforcement are needed. Further, to wean people at the bottom away from heinous acts of poaching and illegal trade, toward alternatives, necessitates the creation of alternative opportunities.

Non-governmental Initiatives

In this connection, buffer zone (BZ) which is an innovation in the sphere of protection of national parks and conservation of wildlife are in need of revisit and new initiatives. Many of these zones are doing a great job at the moment; however, they have not realized their full potential as yet. With better technical inputs and more authority and autonomy, these zones can share considerable burdens, currently borne solely by national parks as suppliers of wood, firewood, fodder and materials for hutments. Furthermore, some of these zones have already made commendable contributions by creating alternative new enterprises, such as goat-farming, pisciculture, plantations, etc. People living on the fringes of parks or in close proximity can be allured in these new enterprises away from the present detrimental and destructive activities. For this, services of local experts could be requisitioned and successful cases can be replicated. Over the years, WWF and other international agencies have created anti-poaching awareness campaigns among local communities and voluntary organizations that are more than willing to work and cooperate with government and park authority. All these initiatives that are so valuable for the purposes of protection and conservation need to be further nurtured and effectively used.

Necessity for Sensitization at Centre

Nepal has been traditionally ineffective in inter-ministerial, departmental and agency communication, coordination and cooperation. Most of these institutions prefer not to share information that they possess. This syndrome pervades from the centre down to the grassroots. This is amply demonstrated and proved by cases of parks and poachers. The same people are caught as poachers, prosecuted and punished time and time again. Park offices, DFO's, CDO's, army, police and customs work at cross purposes. Criminals are aware of this gap and take ample advantage of it by transferring cases from one area and court to the other. Likewise, they even get prisoners transferred from one prison to another. Ministries are perhaps unaware of these happenings, therefore, it is recommended that a high-level committee under the chairmanship of the Chief Secretary be formed to look into all the problems and issues related to parks and poachers and the committee should include secretaries, ministry of defense, finance, foreign affairs, forest and home. The committee should also be authorized to invite other secretaries and experts as required.

The quasi-judicial system should be strengthened by increasing the number of members. Individuals involved in plotting poaching/illegal trade should also be treated like poachers. The number of field staff should not be inadequate.

Anti-trafficking in Darchula

The northern and western district of Darchula are highly porous, therefore, conducive to smuggling and trafficking of wildlife and their parts. Its remoteness, difficult terrain and inaccessibility make it a natural haven for poachers, traffickers and smugglers. The tri-junction, borders of china, Indian and Nepal meet

has had many scarce and weak presence terrain of government administration. To aggravate the situation further, weak forest, police, border, customs and local administrators provide inducement.

To prevent poaching, trafficking and smuggling, both in the north and west, overall administrators of the district be completely revamped. A high multi-sector committee headed by the Chief Secretary be moved.

People's Perception of Park Management

In spite of the concerted efforts of armed guards and park administration results are far from satisfactory as poaching continues at its own pace. Mobilization and stationing of both civil and army guards are far from effective. Incidences of poaching come to their attention very late. They have no wherewithal to promptly respond to the incident.

The gaps in surveillance need to be addressed. To make park management more effective, inadequacies of both human and financial must be addressed by improving the system, and, not on an ad-hoc basis. There is a shared perception that park management suffers from many problems, even anti-poaching units feel unsafe. As they see perpetrators moving around freely.

Park-People Relationship

The present relationship that exist between park and people who live on the fringes are confrontational and conflictual. People find that park and its wildlife contradictory to their interests, wildlife encroaches on to farms, destroying their crops and hurting people and domestic animals. Wildlife inflicts heavy damage in terms of lives and livelihoods. They visualize the park as the source of their problems which impinges on their freedom of movements and other rights.

This perception and relationship need to be changed from one of the conflictual and confrontational to a cooperative one. Benefits from the park must flow down to the people. They should feel as if they are partners and direct beneficiaries of parks. Alienation of the people needs to be converted into affiliation and attachment towards parks and wildlife.

The state of animosity needs to be converted into cordial and friendly relationship. People feel betrayed and bitter when compensation is not given promptly, adequately and on time.

Protection of communities, their settlements, fields and farms should also be the responsibility of the parks. People should not be left entirely to fend for themselves, the park should be complimentary to people's needs, and authorities should emphasize with their plight and problems. A positive attitude of park staff towards people will help to transform this conflictual and confrontational relationship into a caring, positive and win-win relationship. A positive non-zero sum relationship where parks, people and wildlife can mutually benefit.

5.3 Actions Suggested

Actions against poaching and illegal trade in wildlife can be neither implemented in isolation by one organization nor at one specific level of governance. Synergy is required among the relevant organizations (both government and nongovernment), and at all levels from local communities to central policy making to the governments in the region.

Based on the above mentioned conclusions and the recommendations, the following actions are suggested for implementation by the respective organizations at the four levels of governance:

5.3.1 Government

At Community level

Campaigns against poaching and illegal trade

The CBOs organized under the aegis of the buffer zone system can be mobilized for this action. The authorities of protected areas and district forest offices should take initiatives and lead programs in their command areas. The government agencies should involve conservation organizations like NTNC for technical support. Similarly, the government may approach INGOs like WWF, IUCN, and ICIMOD for financial and material support the programs. The participants should include: eco-clubs, Nepal Scouts, Junior Red Cross Circles, youth groups and other CBOs. The participating local organizations should get

incentives: rewards, compensation and grants. Such incentives should be linked directly with beneficial packages such as income generation and employment opportunities.

At National Level

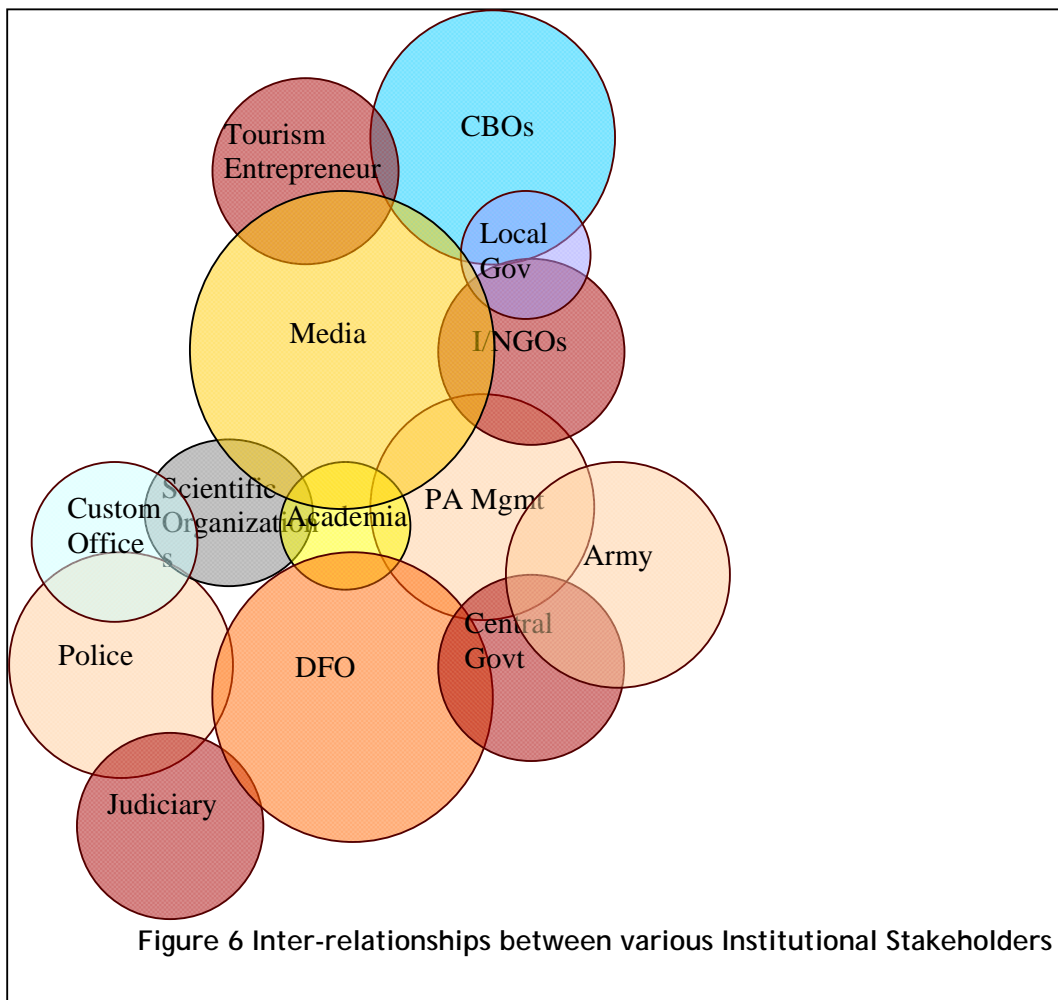
Three main actions are suggested at the national level; i. High level coordination committee, ii. Capacity building of key partners, iii. Conduct investigation of wildlife crime

i. Formation of a high level coordination committee against poaching and illegal trade

Several institutions are responsible for effectively undertaking anti-poaching and anti-illegal trade operations. Their specific roles and degrees of contribution as well as inter-relationships for synergy are summarized in Table 3, and in Figure 6.

Institutions	Areas	Anti-illegal trade	Anti-poaching
Academia	Research, Knowledge	2	2
Army	Protection, (and Investigation)	5	2
CBOs	Supportive, Protection, intelligence	4	4
Central Government	Law/policy, International relations	3	3
Customs	Investigation, Control	5	1
District Forest Office	Protection, Punishment, Investigation	5	4
I/NGOs	Supportive, Awareness	3	3
Judiciary	Penalties, Legal aspects	1	5
Local Government (DDC, VDC)	Supportive, Control	2	2
Media	Information, Awareness	5	5
Police	Investigation (Intelligence), Protection	2	5
Protected Area Management (DNPWC)	Protection, Punishment, Investigation	2	5
Scientific Organizations	Authentication, Analyses	1	3
Tourism Industry	Sensitization, Information dissemination	3	3

* There are several institutions responsible for anti-poaching and anti-illegal trade. Their contributions vary depending upon their mandate. The scale High (5) to Low (1) has been used to depict their roles and contribution. In the Figure 7, the size of the circle and their closeness depict their level of responsibilities and proximity to each other.



The following structure has been proposed for the national level coordination committee of the relevant organizations:

National Coordination Committee against Poaching and Illegal trade

Chair: Prime Minister of Nepal

Member and Secretary:

Minister of Forests and Soil Conservation assisted by the Department of National Parks and Wildlife Conservation and the Department of Forests

Members:

1. CITES Management authority (Department of Forests)
2. CITES Management authority (Department of National Parks and Wildlife Conservation)
3. CITES scientific authority (Department of Plant Resources)
4. CITES scientific authority (Natural History Museum)
5. Conservationist as nominated by the Prime Minister
6. Representative of the IUCN Members' National Committee
7. Representative of the Ministry of Defense assisted by the Directorate of National Parks and Wildlife Conservation
8. Representative of the Ministry of Education assisted by Academia (NAFOL, NAST)
9. Representative of the Ministry of Finance assisted by Custom Department
10. Representative of the Ministry of Home assisted by the Police Department

11. Representative of the Ministry of Information assisted by Media
12. Representative of the Ministry of Law and Parliamentary Affairs assisted by Judiciary
13. Representative of the Ministry of Local Development assisted by Local Government (DDC, VDC)
14. Representative of the Ministry of Social Welfare assisted by I/NGOs and CBOs
15. Representative of the Ministry of Tourism and Civil Aviation assisted by Nepal Tourism Board
16. Representative of the NTNC

Observers

Representatives of international conservation organizations: ICIMOD, IUCN and WWF

ii. Capacity building of key partners

- DNPWC and DoF should enhance their conservation knowledge base on anti-poaching and anti-illegal trade. Authorities who take special responsibilities of quasi judicial power should be given special orientation training. They should also develop and implement monitoring system and database on poaching/illegal trade in wildlife.
- The protection/intelligence system of Nepal Army, Nepal Police and the Tikauli armed forest guards training center should develop expertise in biodiversity conservation. The frontline cadres of the army and police should be oriented on biodiversity conservation on a regular basis. The syllabus of the army and police academies should be developed and implemented with trainers training programs. On the one hand, the NA protection units should expand patrolling system within the protected areas, and on the other hand, the police intelligence system should be expanded across the country. Both organizations should be supported with physical facilities, equipment, vehicles, as well as special units with sniffer dogs. The Tikauli center should be strengthened with improvements in security for storage of confiscated items.
- Scientific organizations: NAFOL, NHM, Central Zoo and DPR should enhance their scientific capabilities with improved infrastructures, human resource development and regular budgetary allocations. The enhancement programs should focus on CITES implementation.
- All key partners (management, protection/intelligence system and scientific organizations) should improve their information base with libraries, documentation centers, internet access, and communication systems.
- The government agencies may approach INGOs like WWF, IUCN, and ICIMOD for financial and material support for capacity building programs.

iii. Conduct investigation of wildlife crime

- The police department should undertake investigation of wildlife crime on a continuing basis. Along with NAFOL, police should also develop forensic capability on wildlife specimen.
- The government agencies may approach INGOs like WWF, IUCN, and ICIMOD for financial and material support for wildlife crime investigation.

At Regional/Global level

- On behalf of the key players, the Government of Nepal should designate MFSC as a lead agency for bilateral, regional and global cooperation in combating poaching and illegal trade in wildlife. Nepal should develop a global/regional strategic plan against poaching and illegal trade. Such a plan should address issues of origin, transit and consumption of wildlife products across international borders.
- The Government of Nepal should use the global and regional networks of SAARC, IUCN, ICIMOD, SACEP, and Global Tiger Forum, so that the issues of poaching illegal trade could be tackled at the regional and global level. Nepal should also activate bilateral transboundary meetings and cooperation with neighboring countries.
- Regional study tours on CITES implementation should be organized on a regular basis. Such programs should also involve officials from custom and judiciary.

- The government may approach international organizations like ICIMOD, IUCN and WWF for logistical and financial support for global/regional strategic plans to control poaching and illegal trade in wildlife.

5.3.2 Conservation Partners

The role of conservation partners: NTNC, WWF, IUCN and ICIMOD are to complement government efforts to protect wildlife and control illegal trade in wildlife. Their major roles are:

- Provide financial and material support for community campaigns against poaching and illegal trade.
- Participate in high level coordination committee against poaching and illegal trade as observers.
- Provide technical, financial and material support for capacity building and wildlife crime investigation programs as elaborated above.
- Facilitate Nepal's participation in regional/global networks of conservation partners such as IUCN, ICIMOD, SACEP, and Global Tiger Forum.
- Provide logistical and financial support for study tours on CITES implementation.

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