

CHAPTER–ONE

INTRODUCTION

1.1 General Background

Nepal is a small landlocked country between the People's Republic of China in the north and India in the south, east and west. It occupies an area of 147181 Km². The country which is more or, less rectangular in shape extends about 800 Km. east – west and 130 – 240 Km north south. It is situated between 80⁰15" – 88⁰10" east longitudes and in the slope of the Himalayan. Its diversity of climate, landscapes and the country's topographic is the world's most dramatic, extending from near sea level on the south to the top of the world, Mount Everest on the north. Nepal can be divided into three geographical regions Terai (flatland), the middle hills and the high mountains, its covered 17, 68 and 15 percent respectively of the total areas. The flat Nepal's fertile plains of the southern terai support much of Nepal's industrial and agricultural production and a bare majority of its population. Administratively the country is divided into five development regions and 14 zones and 75 districts.

The concept of national parks and protected areas was developed in the United States and extended to the countries around the world after the establishment of yellow stone national park in 1872 .The conversation philosophy that emerged from the American nation of national parks has been adopted in many countries, including Nepal.

The establishment of national parks and reserve has played crucial role in conserving biological diversity but paid little attention to local people by putting restriction on the local use of resource. Due to isolation of local people from the park management and ignorance of their subsistence requirement form park resources most of the protected areas in Nepal are facing park people conflict (Sharma, 1990). Similarly, agriculture crop and livestock depredation caused by animals also influenced the local people to behave adversely towards park management. As a result illegal activities like grossing tree feeling, land encroachment and poaching are increasing severely (Sharma, 1990).

While administrators are striving to preserve national park and protected area from human process, polices for protection frequently run counter to the need of local

people of conflict between the park administration and local people may arise. Particularly in the developing countries after the designation and formal establishment of the park, the common concern of the administration is the relationship with the people who live within or near the park. The necessities to protect natural resources, on the one hand and, and other availability of food, fodder fiber and fuel wood on the other inevitably leads to antagonism between the park and administration and the local people. A major source of friction is wildlife depredation that involves damage and destruction of crops and livestock. The destruction of crops compensation for these losses that are an outcome of habitat protection in the national park (Bagale, 2004).

Nepal started impressive initiative to protect its unique bio-diversity since 1973 by promulgating the national park and wild life reserve conservation Act 1972 (2029 BS). Parallel with the establishment of Chitwan National Park as the first protected area of the country at present, under the department of national parks and wildlife conservation an authorized government organization to the parks and protected areas in Nepal, have 10 national parks, 3 wild life reserve, 6 conservation areas and one hunting reserve, and 12 buffer zone areas. These protected areas cover 34,185.62sq km (25.23%) of the total geographical area of the country (www.dncp.gov.np).

Shivapuri national park is a protected area representing the pristine eco-system in the mid hills of Nepal. The park is located in the northern fringes of the Kathmandu valley. Thus becoming a primary watershed for the supply of drinking water to Kathmandu, the capital city, It covers 144 Km² adjoining the 23 VDCs (Village Development Committee) from Kathmandu, Nuwakot and Sindupalchowk districts.

The park is unusually walled in by 111 km of the stone masonry structure surrounding almost the entire park. This 1.2 to 1.8 m high wall seems to have been erected to protect the park from the illegal harvest of forest resources particularly firewood and fodder, and protect it from illegal grazing. Despite the presence of the wall and the deployment of the park authorities, illegal removal of the forest resources is a common phenomenon.

The Shivapuri range remains the major source of fuelwood, fodder and other forest product for the surrounding population. With a continuous increase in population of

Kathmandu valley, degradation of the Shivapuri area worsened during the early 1980s due to the phenomenon of the “tragedy of the commons”. Shivapuri forest were cut and overexploited to meet the increase demand for fuel wood fodder and the timber for the adjoining VDCs.

The protection of the current national park started from as early as 1976 when HMG realized the further degradation of the Shivapuri watershed would be detrimental to the protection of vital water sources. That same year, HMG initiated Shivapuri watershed development project. To overcome these problems, The Government of Nepal constituted the Shivapuri watershed area development board and launched various rehabilitative and preventive measures to protect Shivapuri in 1976. In 1982 the Shivapuri protected watershed area was declared under the soil and watershed and conservation act, and in 1984 it was declared as the Shivapuri watershed and wildlife reserve. At the same time the Shivapuri watershed area development board was converting to Shivapuri watershed and wild life reserve development board. This was abolished by the decision of council of ministers of HMG on the date of 2057-06-13 (Sept, 2000) and was later declared the national park on 2058-11-06 (18 Feb. 2002).

1.2 Statement of the Problem

Shivapuri national park is those national park of the country which represents the mid hill ecosystem. Twenty-three (23) VDCs of Kathmandu, Nuwakot and Sindhupalchok districts surround the park (Fordland, 1995).

Most of the people living around the park are illiterate and poor and they are dependent on forest resources for their daily subsistence. Thus they are putting heavy pressure on the park. On the other hand, people living in and nearby the park are also increasingly suffering from crop damage and livestock depredation by wildlife. Local people perceive restrictions on their use of park resources negatively and consider the protected area as being merely preserved for the wild animals, which are no use to them. Resource required for the subsistence economy include seasonal access to the forest for fodder and firewood, edible fruits and vegetables, medicinal plants or their parts, fishing, hunting and collection of young animals for meats and eggs, and the grazing of livestock in the forests and grassland. Most of the local forest are now protected inside the park, thus conflicts with people over resources are inevitable.

Allowing people in harvesting thatch grasses, banding materials, tall trees and some firewood to fulfill their subsistence need provide only a partial answer. The whole issues of the subsistence requirements must be examined in a more holistic way and policies that are finely simplified between local people's subsistence and the long-term conservation goals of the national park should be developed and implemented.

Protected areas in Nepal are linked with the local people, and there is always some interaction between protected areas and the people living near it. Local people living adjacent to the park boarded depend on its forest resources for meeting their daily need for fuel wood, fodder, timber and non-timber forest products. On the other hand, park animals enter into the cultivated fields to raid agricultural crops, and there is no provision of compensation for such damages. In a country like Nepal where a higher percentage of people are illiterate, below poverty live and are unhealthy, do they have the capacity to think about national parks and do they have preferences in their conservation. This is the problem still to be solved. Shivapuri area has been declared as National park, it has a lot to do for this sustainable management. Very few study have been instigated to assess such conflicts in Shivapuri National Park, and therefore study were focused to examine the socio-economic condition of the local people, to analyze the demand and supply of firewood in Budhanilkantha area and to assess the component of conflicts between the local people and National Park.

1.3 Significance of the Study

Shivapuri national park is a protected area representing the pristine eco-system in the mid hills of Nepal. The park is located in the northern fringes of the Kathmandu valley. Thus becoming a primary watershed for the supply of drinking water to Kathmandu, the capital city, It covers 159 Km² adjoining the 23 VDCs (Village Development Committee) from Kathmandu, Nuwakot and Sindupalchowk districts.

There are very few researches done in Nepal. They are mainly concerned on socio-economic relationship on protected area. This study would be helpful for finding out socio- economic condition of the local people on budhanilkhantha and to find out the component of conflict between local people and National Park. The major significance of this study would be as follows.

-) The finding of the study would be useful to people to develop awareness towards the protected area.
-) It would be useful to understand the importance of the policy maker.
-) It would be references of national park manager how to program lunch.

It would be useful as guidelines for further researchers in the similar filed.

1.4 Objective of the Study

The main objective of the research is to assess the role of protected areas in sustainable livelihood of the people living nearby. The specific objectives of the study are:-

-) To examine the socio-economic condition of the local people.
-) To analyze the demand and supply of firewood in Budhanilkantha area.
-) To assess the area of conflicts between the local people and National park.

1.5 Limitation of the Study

The study has following limitation:

-) The findings of the study are limited in the selected sample units.
-) Since, this study concern with the people living within and around Shivapuri National park; it may not represent the relationship between the people and parks in other places of the country.
-) The variables in present study are operationally defined in view of the general characteristics of the study and therefore they are applicable only to the present context.
-) Other constraints of this study include limited time for field survey and resource limitation.

CHAPTER–TWO

LIETRATURE REVIEW

2.1 Conceptual review

2.1.1 Conceptual/ working Definition

Bio–diversity: The variety of life in all its forms levels and combinations. This includes ecosystem Diversity, species diversity and genetic diversity.

Buffer Zone:An area on the edge of a protected area that has land use controls that allow only activities compatible with the objective of the protected area, appropriate activities might include tourism, forestry and agro forestry. The objective of such Zone is to give added protection to the protected area, and to compensate local people for the loss of access to the biodiversity resources of the reserve.

Conservation:The management of human uses of organisms or ecosystems to ensure such use is sustainable. Besides sustainable use, conservation includes protection maintenance, rehabilitation restoration and enhancement of population and ecosystems.

Ecodevelopment:Economic and social development being undertaken in a manner, which is ecologically sensitive, that is compatible with and takes advantage of natural systems.

Ecosystem:The totality of factors of all kinds that make up a particular environment; the complex of biotic community and its aortic physical environment, functioning as an ecological unit in nature.

Ecotourism:Traveling to and visiting relatively undisturbed or uncontaminated natural areas with the specific purpose of studying admiring and enjoying the scenery, its flora and faunas, as well as existing cultural manifestations found in these areas.

Farmer:One who resides in a village and cultivates the farmland that he holds as the major source of living.

Household: A group of individuals related to each other by blood, marriage, or co-operation, living in one and the same residential unit, contributing to and or sharing the group's material and financial resources, and partaking of meals prepared at the same fire place or stove, from one kitchen with a single fire place or stove.

Local people: Individuals live within the same political boundary of the study area.

2.1.2 Concept of protected area

Protected Area: Any area of land that is, subject to legal measures limiting human use of its plants and animals. Protected areas include national parks, game reserves, multiple-use areas, and biosphere reserves among others.

National parks: Relatively large area of national or international significance that are not to be materially altered by human beings: Access is controlled, but visitors are encouraged to use the areas for recreation and study.

2.2 Forests Management in Nepal

Forests come to existence as the result of natural growth or of the forestation made by man. Forests are very much exploited for forest products. A forest is a plant society of arboreal and shrub species both of which are of economic importance. Forests greatly affect the climate, the river system, the conservation of soil and the ecology existing between trees and animals.

Thus, the main purpose behind developing the forests of Nepal lies in the need for maintaining an ecological balance so as to meet the average requirement of timber, fuel wood, fodder, minor forest products, soil protection, water conservation, wild life recreation and aesthetic values.

Since time immemorial, Nepal has been very rich in forests. There is an old Nepalese proverb saying "Hariyo ban Nepal kodhan" which means green forest are the wealth of Nepal. It was in earlier days that the terai of Nepal was full of forests and there the malarial climate prevailed.

The forests of Nepal are greatly depleted mainly owing to one factor, as fuel wood is the single biggest item with 86.7% of the total energy consumption. As a result of

overdependence on a single resource the forests resources are firstly dwindling (Poodle,2005).

2.3 Review of conservation policy in Nepal

National Forestry Plan

The National Forestry Plan (1976) constitutes one of the main frameworks for the conservation of forests in Nepal. The Plan lists the major constraints and proposed policies to tackle them. Its objectives are to restore the balance of nature, to encourage economic mobilization, support scientific management practices and technological development, and to promote public cooperation.

Bajracharya (1997) was very concisely described the salient features national forestry plan on the basis of an integrative outlook on Nepalese forest eco- system. Besides, two mimeographed reference published by the ministry of forest. H.M.G, are also available under the caption “people participation in forest protection and production”and “New Revolution in Forest management part I, part II 1978. These two references lay down the rules, regulations and conditions for the new national forestry plan.

The national forestry plan recognizes the value of forests for the following five reasons.

-) To have renewable resource for producing a number of goods and services.
-) To help conserve soil and water.
-) To create an environment of scenic, beauty with appropriate aesthetic value.
-) To provide a medium for recycling wastes.
-) To ensure a habitual for preserving faunal and floral wealth.

The national forestry plan has considered 4 types of forests of Nepal.

1. Terai and bhabar forests
2. Doon and inner terai forests.
3. Midland forests.
4. Inner Himalayan forests.

These four types of forests have been recognized as typical for different zones, suited to the skills and attitudes required by particular ethnic groups of people towards a certain kind of forest and forestry and catering for different needs for management in various geographical zones.

Conservation Act

The National Park and Wildlife Conservation Act 1973 (fourth amendment in 1993), Buffer Zone Regulations 1996 and Buffer Zone Guidelines 1999 provide policy and legal frameworks for the programme. The main regulatory arrangement is that certain areas around the existing PAs can be designated as buffer zones and brought under the PA authorities' jurisdiction. The rationale here is that the single management unit would facilitate coordinated approach to conservation and development efforts both in the park and its buffer zone. The first buffer zone was the one around the Chitwan National Park and was established in 1996.

By the middle of 2007, 10 national parks are surrounded by formally established buffer zones in Nepal. The programme has established a three-tier community-based institutional model that includes user groups (UGs), user committees (UCs) and a buffer zone management council (hereafter the Council). UG comprises representatives from all households, UC comprises chairpersons and secretaries from the UGs of particular villages and the Council comprises all UC chairpersons of the PA concerned. The programme has two major components: natural resource management and socioeconomic development of local communities. Natural resource management in the buffer zone is decentralized to UCs and UGs.

Many forest patches have been handed over as community forests under a tripartite agreement between the park authorities, UCs and community forest user groups (one of the several types of UGs that are formed in buffer zones). Besides, specific provisions are made for the collection of soil, stones, sand and flood drift wood in the area. For local socioeconomic development, 30-50% of the PA income (income made through tourism, sale of forest products, fines and others) is being shared with local communities through the Council. The funds are used to support projects for improving local infrastructure, energy saving technologies, educational programmes, income-generating activities, and the like. In addition, there are schemes for

compensation against the loss of property and human casualties caused by wildlife. The Council allocates available development funds to each UC. UCs can plan and disburse the available funds within the budget ceiling defined by the Buffer Zone Guidelines 1999 to ensure a balanced investment in various aspects of tcomes. The fifth section highlights the emerging issues and lessons, followed by represented in Councils, UCs and UGs are often members of better-off groups and 'upper caste' males who often control local social and political institutions (Budhathoki 2003; Paudel, 2005).

2.4 Forests in and around Kathmandu Valley

Fleming (1993) has described the general forest in the mid land Nepal. He has given an example of forests of Godavari. According to him, there are various exotic and endemic varieties. Among the indigenous Himalayan tree are schema and Laurels. Wild apple, raspberry, oak, rhododendron, bamboo are other plants. Actually there is a mixture of Tropical elements (bam boos) and temperate (oaks) is the theme of forest found in mid land Nepal. Following species are found in Kathmandu Valley are Pinups roxburghii(chirping), Alnusnepalensis (utis), Quecussp, Schimawallichii and Rhododendron sp.

Another very suitable example of Nagarjun forest in the midland of Nepal has given by Kunai and Shakya (1973). This forest makes the northwest boundary of the Kathmandu valley, which consists of 4 types of forests such as Shimawallichii forest; Dry oak forest, mixed broadleaved forest, Chorine forest.

According to Kunai and Shakya, schema wallichii are found on the major part of the hill while mixed broad. Leaved forest occurs in north facing slopes. Dry oak forest occupies in a southern or western slopes near the ridge southern slopes of the hill. In the schemaWallachia forest, the shrub layer consists of michilusdetheii, phoebe lanceolata, quarkspicata, humid places are occupied Suglansregia. In shrub layers myrisinesemisecret is often found.

2.5 Protected Areas and Sustainable Management

Nepal has relatively short history of national parks and wildlife reserves. Nepal faced various political situations under the monarchy system. Under the Rana monarchy

from 1846 to 1950 Nepal was not opened to any foreigners except the British. However, some areas in the country had been set – aside as hunting reserves by the Rana regime (1846 - 1950) the concept of conservation first came into existence during the 1950s and the first wildlife law was promulgated in Nepal in 1957. Since then almost all five – year development plans have stressed the need for conserving wildlife. The Aquatic animals protection act (1959) was passed in 1967, in which the importance of wetlands and aquatic animals was emphasized. The act prohibits the use of poison and explosive materials in water bodies and the destruction of dam, bridge or water system with the intent to catch or kill aquatic organisms. A small rhino sanctuary was established in Chitwan in 1964 to protect the population of one – horned rhinos (rhinoceros unicorns) with the help of a group consisting of soldiers and trained people, and known as GaidaGasti (Rhino Patrol). Subsequently, in 1969, six royal hunting reserves in the Terai and one in the mountain area were gazetted under the wildlife protection act 2015 (1969), but effective management could not be achieved because of the absence of adequate regulations, organization and staff (HMG, 1988). In 1970, His late Majesty the King Mahendra approved in principle the establishment of the Royal Chitwan national park and Langtang national park. In 1979 in 1973, a national park and wildlife conservation (NPWC) act came into force and a long – term project was begun with the help of the FAO and UNDP. The 1973 act provided broad legislation for the establishment of national parks and reserves to protect areas and species. Since 1973, the act has undergone through its fourth amendment (FAO/HMG, 1995)

Four types of protected areas has been described under section 2 of the NPWC act of 2012, namely national park, wildlife reserve, hunting reserve and conservation area, in Nepal at present 16 protected areas exist, 10 national parks, 3 wildlife reserves, 5 conservation areas and 1 hunting reserve covering about 23.23 percent of total land area of the country. National park is a protected area managed mainly for ecosystem protection and recreation.

2.6 Buffer Zone

In 1993, Nepal passed the Fourth Amendment to the National Parks and Wildlife Conservation Act to address natural resource problems occurring on lands adjacent to

national park boundaries. The Act gives HMG authority to designate buffer zones on lands adjacent to national parks or reserves.

Buffer zones are areas in and around national parks and wildlife reserves created to lessen biotic pressure and for the sustainable management of natural resources. The creation of buffer zones is aimed at motivating local communities in the participatory management of forest resources to fulfil their needs of forest products through the User Groups. The government has made provisions to plough back 30 to 50 percent of the revenues earned by the respective parks to community development activities such as skill development and income generating programs to improve their living condition and, health and sanitation as well as adult and non-formal education, to generate awareness. The long-term objective is to gradually involve the local people in nature and wildlife conservation.

The Chief Warden is responsible for managing forest resources in designated buffer zone areas, but the law encourages him to form User Group Committee (UGC) to promote local involvement in forest management.

2.7 Concept of Natural Resource Conflicts

Natural resources are continuously on decline whereas the population has been growing in developing countries like Nepal. As a result conflict over natural resources is hot issue of discussion. Natural resource conflict simply refers to disagreement and dispute over the access to control over and use of natural resource between individual, community, region and nations.

The first kind of struggle is common to all people overcoming the limits of native and existing technology for example in hunting and gathering society the availability of animals and fruits in the surrounding areas “natural” limit on the society’s surrounding and standard of living. Conflicts between two groups got to do with power and authority in our society. All interpersonal conflicts, whether they occur in a family, or between groups have certain elements in common.

One of the popular definitions opined by Coser (1967) asserts that conflict is “a struggle over values and claims to scarce status, power and resources which the aims of opponents are to neutralize, injure or eliminated the rivals.”

Couser (1967) approaches to dealing with conflicts follow from his alternative view of human nature. If basic human needs can be fulfilled in varieties of ways, then give the high costs of destructive conflicts. It would be in the best joint interest of actor persons, groups, organizations, and societies to pressure co – operative resolutions of their conflicts.

2.8 Sustainable Management: Park and People Conflict

Conflict issues are mainly related to people livelihood and are difficult to overcome. Protected area management is always difficult. The problem is limited resources and population growth, most of the protected areas were established on the public land but it also covered more of the private land. Even in the public land people used to use that land for their various purpose such as for grazing, fire wood, fodder and for timber or hunting, fishing. Once it converted to the protected area, people have no more right to use those resources this led to the park people conflict. There is unanswered question, if any particular area was not covered under the protection what would happen? When I asked these questions to the local people related to park, they accept that we might have lost all wildlife and flora and other fauna.

Park people conflict is not particular in Nepal; it can be seen in most of the developing countries. In developed world, nature of conflict is different; however, still there is conflict (Bhandari, 1998)

Active conservation of habitats has increased wildlife population with in protected areas, which start causing damage outside the park. The relation between parks – people is imbalanced when the park animals damage outside and disturb the adjacent settlement. Damage of agricultural crop, human harassment, injuries and death, and livestock depredation are common causes of this imbalanced relationship (poudel, 2005)

It is very difficult to villagers to understand why wildlife may damage their crops, while they must not kill any wild animal in return; they are not convinced of the rationale of protecting forests and wildlife, which they have been utilizing for thousand years.

2.9 Government effort for managing park – people conflict

Numerous successes have been archived since the coming of the protected area system in the management and protection of biological resources and their diversity, particularly with regard to ecosystems and flagship species. But, while the protected area systems come, as a blessing for wildlife there was a price to pay. Strictly restricting on and regulations imposed on the people living around those protected areas in the use of forest resources, while, till the coming of the act, they had ready access to, naturally gave rise to discord between the park management and the local communities. It soon becomes apparent that unless those issues were properly addressed, the government's conservation efforts would not be able to move ahead in a balanced and sustainable manner (www.dnpwc.gov.np).

In recognition of this fact, and to rectify the situation, the NPWC act was amended in 1992 to incorporate provisions for “buffer zones “ in the protected area and the sharing of 30 – 50% of the park/reserve annual with the buffer zones. At around this time, a participatory approach to conservation had already been adopted for the forest time by HMG/DNP WC with the introduction of the conservation areas concept in the late 1980s after the Annapurna conservation area was established (DNPWC, 2003)

In the terai parks and reserves as well as, DNPWC gradually started to introduce the participatory approach a forerunner to its buffer zone programmes. In nurturing this participatory approach, DNPWC started holding regular co – ordination meetings with the local communities and began to exercise a little more flexibility in giving local people access to park/reserve resource use.

The buffer zone concept with the amendment of the NPWC act in 1992, the ground work for this was laid by DNPWC with the technical and financial support of UNDP through the park people program (1995 - 2001). Its achievements are being institutionalized by the participatory conservation program since 2001. The main objective of establishing buffer zones is to meet the natural resources needs of local communities as well as minimizing human impact on protected areas so as to avoid a contentious situation between the park management and the people. So far, six buffer zones have been declared. These include those at Royal chitwan national parks, royal Bardiya national park, Langtang National park, sheyphoksundo national park, Makalu

Barun national park and Sagarmatha national park (www.dnpwc.gov.np) with the coming of the buffer zones and proposed buffer zones, the DNPWC, has implemented several programs in different buffer zones with the support of various partners like UNDP, WWF Nepal program, IUCN, CARE – Nepal, TAI, DFID, NEDA, and KMTNC. The DNPWC carries out all buffer zone management activities in close consultation and partnership with the various community – based institutions like user groups, community, BZMCs and the BZMCs that have been formed (DNPWC, 2003).

2.10 Review of the Previous Studies

People's traditional rights to graze cattle, collect fodder, firewood and timber inside the forest have been made illegal since the forested area changed into national park. This has forced the local people to depend on the remaining forest resources outside the national park. Such a situation has to lead to accelerate degradation of the forest patches and growing meadows. At present these areas are seriously encroached by various updatable species. Due to lack of alternative resources, local people are forced to graze their livestock in those degraded areas throughout the year, this has become one of the main sources of conflict between the park authority and the local people (*Sharma, 1991*) cited in (*Gyawali, 1994*)

The conflict between national park and local people is rooted in the conception of parks as areas without human habitation. The concept of national park in the strict sense of "preservation" has thus entangled people in conflict who have traditional use of such areas. Concepts based on intellectual and aesthetic values have little meaning to local villagers who have to struggle day to day out for their existence. If source of next meal is major worry aesthetic or environmental conservation has little relevance to people (*Mishra, 1982*)

Sharma (1991) found that the main cause of conflict is due to crop and livestock depredation in RCNP. In 1991, he calculated crop damage by two methods i.e. interview and Net Area Damage (NAD). He reported that real crop damage was five times less by NAD method than interview. He also reported that paddy is severely damaged followed by wheat, corn, oil seeds, lentils, and vegetables and miscellaneous.

Sharma (1990) in his thesis "An Overview of Park-people Interaction in RCNP" takes up the main problems of people arising from park conservation and their resolution. In order to change the villagers habit of forest use Sharma says that they can be encourage to plant private trees, use of agriculture waste, use of improved stoves, etc. he also suggested that management forest close to villages that tow third area be planted should be managed by park authority as a buffer zone for multiple purpose use including firewood from the park forest should be stopped.

Adhikari (1998) observed that local people's perceptions related to scarcity of firewood and lack of grazing land, fodder scarcity, food deficit, crop damage by wild animals, lack of agricultural land and irrigation, lack of timber, lack of settlement area are the main problems reported by the people. Deaths of animals, foddors and crops disease are other problems.

People's negative perception about protected areas are the result of various factors like economic, social and others. Economic factors include prohibition in extraction of wood, fodder and thatch, crop damage, livestock depredation: lack of grazing facilities for animals, and inability to kill animals when they entered the croplands. They have strong feelings that the benefit of the park goes directly to government and foreigners. These are the problems faced in most of the national parks in Nepal. In case of the Lumbini, government did not pay a good price for land wthey they resettled people. The government promised work to them when they were resettled but later on, it was turned to empty promise. Within the village of RBNP, the villages, indigenous and marginal people and women were found to have been already affected by the park and protected areas. It has been their dominant perceptions for example, in Bardia (BMNP). Tharus are most sensitive to the lack of access of resources in the case of KakriBihar, women are more likely to react negatively to protection because they make main responsibility for gathering resources such as fuel wood and fodder. In Lumbini, people with some formal education and people with more than one hectars land are more positive towards the park (Allendorf, 1999)

The above literature reviews provides the guidelines for the research. The most important factors to socio-economic relationship with protected area. Different protected area people are dependent in protected area, gradual change of life styles

and improve the economic condition of part of Nepal. Many research report shows that protected area people and national park are close relationship between each them.

Moreover, the previous researchers have not done even study separately. Thus, to fill the gap, this study had been conducted. This study fulfils the prevailing research gap. This work will help to acquire knowledge regarding tools and techniques used and extra knowledge for the further researcher who are going to research in this or related to protected area.

CHAPTER–THREE

RESEARCH METHODOLOGY

Methodology refers to the procedure how the study was done in the field study duration of this study. This study conducted to find out socio economic relationship with protected area at Sivapuri National Park. To complete this research following methodology has been used.

3.1 Research Design

This study was in descriptive nature. The systematic investigation was based on evidence and reliable data carefully taken from the field study. This study followed quantitative research design where data were analyzed in quantitative basis. As indicated; this design tends to find out the sources socio economic relationship with protected Area.

3.2 Location of the Study Area

The study has been conducted in Bishnu Budanilkhantha VDC ward no. 1 of Kathmandu district. The study area is southern part of Kathmandu valley around 15 km. This area is directed related to Sivapuri National park and its relation between their people.

3.3 Rational of the Selection of the Study Area

Budanilkhantha area has been purposively selected for this study. The reasons for selecting this area are:

-) No similar study has been carried out in the study area yet.
-) The result obtained can be generalized to the area.
-) Accessibility of the researcher.

3.4 Nature and Sources of Data

Both primary and secondary sources of data have been used for this study. The sources of primary data are collected from household survey and observation from selected people living in the protected area. Similarly, sources of secondary data are flash report, CBS, published articles, journals, text books and different articles etc. Information available on internet has been also used as a source of secondary data.

3.5 Population and Sample

The study has been carried out in Budhanilkantha area of Kathmandu district. Among the budhanilkhanda VDC, ward no 1 total household is 129, among this household 43 sample has been selected through purposive sampling. 43 household have been selected who is directly related to sivapuri protected area. The respondents have been selected by purposive sampling method.

3.6 Techniques and Tools of Data Collection

3.6.1. Household Survey

Selected household were interviewed with the help of semi-structured questionnaire. The survey was fruitful to take information regarding the socio-economic condition, conflict between park and local people and effect of protected area on their livelihood. The priority was given to the household head in case of not availability of household head in second attempt, the available adult member of the household matter and the park will be interviewed. The questions have been asked to the respondents and answers have been filled up by the researcher herself.

3.6.2 Observation

An unobtrusive type of observation was used during the course of field work. Observations were especially focused as socioeconomic setting, settlement pattern, used of fuel wood, collection etc.

3.7 Data Processing and Analysis

After the data collection of the required data, it was checked, verified to reduce the errors and then the data was tabulated in master table. The analysis of data includes frequency table, means, pie-chart, and other statistical tools. Data analysis has been

done on the basis of the major themes extracted out of the main bulk of the data. The collected data were analyzed and they were used for data substantiation. Statisticians and the supervisor were consulted to analyzed and interpret the data.

CHAPTER–FOUR

DATA PRESENTATION AND ANALYSIS

This chapter attempts to accomplish the presentation work of the evidence events relating to respondent s demographic and socioeconomic characteristics.Likewise some major issues related to national park. The respondent's knowledge about sustainable uses, conservation and protection etc.Related to park on the basis of the data excreted from field questionnaire. The main areas of the chapter are under three sub headings are socioeconomic condition of local people, demand and Supply of firewood in Budhanilkantha and conflict between the local people and the park.

Analysis and interpretation are considered as the important steps in any research study. This chapter clearly deals with tabulation, analysis and interpretation of the findings on the basis of the information gathered during the study time.

4.1 Introduction of study area

Shivapuri National park was established in 2002.Earlier, Shivapuri of kathmandu,Nuwakot and Sindhupalchok Districts surround the park, (Forland, 1995).Most of the people living surround the park are illiterate and the poor, and they are dependent on forest resources for their daily subsistence. Thus they are putting heavy pressure on the park. On the other hand,people living in and nearby the park are also increasingly suffering from crop damage and livestock depredation by wildlife.

BishnuBudhanilkhantha is a settlement of the valley with 129 households comparatively of 774 populations. This settlement is located in the northern side of Kathmandu valley. Though, this community lives near the SNP.

4.2 Socio-Economic Conditions of Local People

The section below briefly deals with social composition of the respondents, literacy rate and economic structure etc.

4.2.1 Gender of the Respondents

Based on the gender, the respondents, under study can be categorized as male and female. The researcher asked the question to both of them as the sample size.

Table No.4.1: Distribution of Respondents by Gender

Gender	Frequency	Present
Male	18	41.8
Female	25	58.2
Total	43	100.00

Source: Field survey 2014

Table no.4.1 shows that the sample of respondents in the study area, 41.8% of respondents were male and 58.2% of the respondent was female.

4.2.2 Family Type

Household size also plays a vital role in livelihood pattern. Larger the house size requires more recourse, so information regarding the household size of the respondent was also obtained which are shown in the table 4.2.

Table No. 4.2: Distribution of Respondents by Family size

Family size	No. of respondent	Percent
Joint	21	48.84
Nuclear	22	51.16
Total	43	100.00

Source: Field survey 2014

Table no. 4.2 shows that some respondent have joint family and some have nuclear family where has 48.83% of respondents have joint family and 51.16% of respondents have nuclear family.

4.2.3 Religion

Religion, although a simple term in its appearance, is much complex and vague in its meaning, definition and scope. People of a particular religious community share common religious and cultural values which influence socio-economic life of community. In this view, religions of the households have been taken in to consideration.

Table No. 4.3: Religion of the Respondent

Religion	Frequency	Percent
Hindu	39	90.69
Buddhist	4	9.52
Total	43	100

Source: Field survey 2014

Table no.4.3 shows that most of the respondents are followed by Hindu and only 9.52% of respondent are Buddhists.

4.2.4 Education Level

Education is the indicator of quality of development. Its plays the crucial role in the development of society and country. To know the socio-economic condition of any society, education is affecting factor. In general literal means a person who can simply read and write.

Table No.4.4: Educational Attainment of Respondents

Education	No. of Respondent	Percent
Illiterate	9	20.93
Non formal education	11	25.58
Primary education	15	34.88
High school	8	18.60
Total	43	100.00

Source: Field Survey 2014

Table no. 4.4: The education of those sampled at the study area was very good. There were more people literate in Vishnu BudhalinikhanthaVDC. Overall 79.06% of the respondent were literate nearly 34.88% had only completed primary education and 25.58% had non-formal education. The subsistence agriculture system and being able to do work in their field as a worker were the main reasons to force it dropout them from secondary school. The remaining 18.60% completed the high school level education. Out of 20.93% respondents indicated that they never attended school and were not able to read and write.

4.2.5 Occupation

Occupation determines the social status of the people. It helps to raise the life style of the people and it not only gives a social and economic identification but also determines the hierarchies of the people they enjoy in their locality, especially in rural society. Occupation of the household head not only influences the entire family.

Table No.4.5: Distribution of the Respondents by Occupation

Occupation	No. of respondents	Percent
Farmer	12	27.90
Student	9	20.93
Housewife	8	18.60
Services	11	25.58
Business	3	6.97
Total	43	100.00

Source: Field survey 2014

Table no.4.5 shows that agriculture is the main occupation of the study area, where agriculture is the main sources of household. Out of 43 respondents, 27.90% of the respondents are engaged in agriculture as their occupation, 20.93% of the respondents are students. 18.60% of the respondents are housewife. 25.58% of the respondents are engaged in the service sector, 6.97% of the respondents are engaged in other different sector like business and poultry farming.

4.2.6 Land Holding Size

Family property of an individual gives social status and identity to her/him. In this view, economic status of the household has been taken into consideration; the sampled household economic status was operationally defined as relative wealth status of the household in the community in terms of property such as land, livestock, agricultural production, business and services.

Table No. 4.6: Distribution of Respondents by the Land Holding Size

Land Holding Size	Frequency	Percent
Less than 1 ropani	9	20.93
1 to 5 ropani	26	60.46
5 to 10 ropani	4	9.52
Only Houseplot	4	9.52
Total	43	100.00

Source: Field Survey 2014

Table 4.6 shows that 20.93% percent of the respondents have less than 1 ropani land having very difficult to sustain their life only from its earnings. 60.46% of the respondent have 1 to 5 ropani also get difficulty to survive only from its product. The respondents having 5 to 10 ropani are 9.52%. There are 9.52% of the respondents are only house plot. These respondents have low economic condition and sustain their life in very difficult way normally working as a wage labour.

4.2.7 Income source

In Nepal where 25.2 percent of the total population is below the poverty line (CBS, 2012); the main aim of the people is to earn the livelihood. So, income not only provides a financial security but also a social and economic status to the family in society. In this view, income of the sample households has been taken into consideration.

Table No.4.7:Distribution of the Respondents by their Monthly Income (Rs)

Income	Frequency	Percent
5000-10000	6	13.95
10,000-15,000	8	18.60
15,000-20,000	15	34.88
20,000 above	4	9.30
No answer	10	23.25
Total	43	100.00

Source: Field survey 2014

Table 4.7 indicates that the majority of the respondents have monthly income between Rs.15000-20,000 which constitutes 34.88% they have good earnings comparison to other respondents. It is because of their involvement in service sector. While 13.95% respondents monthly income start less than Rs 5000 whose income level of earning is low because of landless, physical weaknesses, less workable forces and short period of workings in agriculture where the cost of labor is Rs.150-200 per day. On the other hand there are 18.60% of the respondent having the income level between 10000-15000 monthly, whose main sources of income is dependent on agriculture sector whether they earn money through laboring on other farm or producing more crops in own land. Similarly 9.30% of have income more than Rs.20, 000. Some respondents involved in business sector through which they earn good money. These respondents have the better life to sustain their livelihood. About 23.25% of the respondent did not give answer about their monthly income.

4.2.8 Livestock

Livestock keeping is another source of income of the local people. Livestock rearing was found to be an integrated, inseparable and important aspect of the farming system and household economy. As in other areas of the country this sector was an important component of the farming system and has contributed a lot in the village economy.

Table No.4.8: Distribution of Respondents by Livestock Keeping

Livestock	Livestock	Percent
Cows	18	20.22%
Goats	15	16.85%
No Livestock	8	8.98%
Cows and Goats	48	53.93%
Total	89	100%

Source: Field survey 2014

Table no. 4.8 shows that the respondents of Budhanilkantha area were keeping different kinds of livestock. Most of the respondents were keeping cows and goats because it is easy to keep and feed them. Out of 89 Livestocks, 20.22% were Cows, 16.85% were Goats, and 53.9% were Cows and Goats. 8.98% of the respondents were not keeping any type of the livestock's because the study area is near to the city of Kathmandu as well as this respondents have work in service sectors and have their own business. Cows and Goats were kept for the purpose of milk and manure. A large number of Cows and Goats were kept for meat, milk and manure. Goats rear for meat. Hence, the local people of the study area reared significant number of live stocks although they have no legal access in natural resources of the National park.

4.3. Demand and Supply of Firewood

4.3.1. Collection of Fodder\Grass

The collection of fodder\grass near the national park should be analyzed in natural context. The researcher asked the questions to the respondents who have livestock in their home from where they collected fodder\grass for their live stocks. The given result is presented in the table.

Table No.4.9: Distribution of Respondents by Collection Fodder\Grass

Sources of Fodder\Grass	Frequency	Percent
Farm land	6	14%
National park	17	39%
National park/Firm land	16	37%
Not Applicable	4	10%
Total	43	100%

Source: Field Survey 2014

Table no 4.9 shows that most of the respondents collect fodder \grass from National park. Out of 43 respondents, 39% of the respondents are dependent on National park because they have few farm lands for fodder and grass collection. The collection of fodder and grass is not easy and they have usually stolen the grass and fodder. If the park's authority saw them in the park, they give punishment as well as paid fine too. 37% of the respondents collect fodder\grass from the farm land and national park. 14% of the respondents collect fodder\grass from farm land because they do not enter in the national park for the fodder\grass. While 10% of the respondents have no livestock so this is not applicable to them.

4.3.2. Energy Source

The people were heavily dependent upon the forest fuel wood. Firewood mostly used for the cooking purposes of the households. The following figure shows the fuel used for energy purpose.

Table No.4.10: Fuel Used For Energy Purpose

Energy Sources	Frequency	Percent
Firewood	7	16.27%
Gas	6	13.93%
Firewood/Gas	30	69.76%
Total	43	100%

Source: Field Survey 2014

Table no.4.10 shows that out of 43 respondents, 13.93% of the respondents do not collect firewood from the national park because they did not use wood as fuel. In this area, majority of the respondents used other source for the cooking purpose. Only 16.27% of respondents use firewood. 13.95% of the respondents use gas and 69.76% of the respondents use firewood and gas. The firewood collect the park is very dangerous for the local people to fulfill their requirements. When the park staffs arrest them at the time of collecting firewood, they punished them.

4.3.3 Wood Used For Cooking Purpose per Day

Wood is another necessary fuel or energy to cook food. But there is lacking alternative source of firewood. So, trees, crops and are the integral parts of the complex farming system in Nepal. To cope with this, people still try to poach firewood from the forest area.

Table No.4.11: Respondents used Wood for Cooking Purpose

Wood used for cooking	Frequency	Percent
Less than 10 kg	18	41.86%
Less than 20 kg	15	34.88%
Less than 25 kg	4	9.30%
No used of wood	6	13.95%
Total	43	100%

Source: Field Survey 2014

Table no. 4.11, Out of 43 respondents, 41.86% of the respondents have used firewood less than 10 kg per day cooking food while 34.88% of the respondents have used firewood less than 20 kg per day.13.95% of the respondents have not used firewood but they used LPG-gas for the cooking food. Only 9.30 % of the respondents have used firewood less than 25 kg per day because these respondents have large family size.

4.3.4 Access to Firewood after Establishment of SNP

Firewood collection from the National Park is very difficult for the respondents living near the park area. When researcher asked the question to the respondents, collection of firewood from the park, the researcher found the following result, which is shown in table no 4.12.

Table No.4.12: Access to Firewood after Establishment of SNP

Convenient to get firewood	Frequency	Percent
Easy	13	30.23%
Hard	6	13.95%
No idea	24	55.81%
Total	43	100%

Source: Field Survey 2014

Table no. 4.12 determines that out of 43 respondents, 55.81% of the respondents have no idea about the collection of firewood from the park is convenient or hard, 13.95% of the respondents said they get hard to get firewood because of the strict rules and regulation of park.30.23% of the respondents have not found any change before and after the establishment of National Park and easy to get firewood after establishment of SNP.

4.4 Perception of Respondents about the National Park

4.4.1 Living Condition improved after the Establishment of SNP

The respondents were asked the question to identify their perception about the improvement of their establishment of SNP. The respondents have negative attitude, which shown in the table 4.14.

Table No4.14: Distribution of respondents about living condition.

Improvement	Frequency	Percentage
Yes	15	34.88%
No	18	41.86%
No idea	10	23.25%
Total	43	100%

Source: Field Survey 2014

Table 4.14 depicts that 41.86% of the respondents said that there were no changes in the living style in this area while 34.88% showed positive attitude about the improvement of living condition of people.23.25% of the respondents have no idea about the improvement of living condition after the establishment of national park.

4.4.2 Tourist Amenities

Tourist is the major importance to Nepal's economy. So one of the original reasons for the establishment of the country's national parks and reserves was to encourage tourism but conservation must remain the prime objective. Tourism must be encouraged to the extent that it is detrimental to the park's integrity.

Tourism in national park is considered essential but it should be subjected to be control. Visitors should be allowed for observation and appreciation, and recreational activities should be restricted so as not to damage the environment. Visitors should be dispersed throughout the park to control over utilization of one area and visual and ecological effects of tourists should be minimized.

Table No4.15: Increased in Tourists Number after the Establishment of park.

Tourist number	Frequency	Percentage
Yes	38	88.37%
No idea	5	11.62%
Total	43	100%

Source: Field survey 2014

Figure 4.15 shows that majority, 88.37% of the respondents were showed the positive attitude about the increasement of tourist. Nobody showed negative attitude about the number of tourists increased after the establishment of national park and 11.62% of the respondents were unknown about the increased and decreased of the tourist's number.

4.4.3 Local Economy after Establishment of SNP

Economy is crucial components for the development of the area. To know, the perception of the people about change in local economy after the establishment of SNP, the detail information responded by the respondents concerning about local economy is confined the table 4.15.

Table No4.16: Respondents Perception about the Local Economy.

Change in local economy	Frequency	Percentage
Yes	8	18.60%
No	33	76.74%
No idea	2	4.65%
Total	43	100%

Source: Field survey 2014

Table4.15 represents that out of total 43 respondents, 76.74% of the respondents said that there was no change in local economy. Similarly 18.60% of the respondents reported that there was some change in local economy. Only 4.65% of the respondents mentioned that they have no idea about the change in local economy after the establishment of the national park.

4.5 Satisfied with Present Condition of SNP

The researcher made an attempt to know the level of satisfaction with present condition of SNP. The researcher asked question to the respondents whether they satisfied with the present condition of SNP. The responses given by them are confined in table 4.16.

Table No.4.17: Respondents level of Satisfaction with Park

Level of Satisfaction	Frequency	Percentage
Yes	26	60.46%
No	18	41.86%
Total	43	100%

Source: Field survey 2014

The above table determines that the majority of the respondents were satisfied with the present condition of the national park. 60.46% of the respondents were very satisfied with the establishment of national park because they got fresh air and drinking water. The study areas environment is very pleasant so they said that we are very blissful about the national park while 44.18% of the respondents were not satisfied with the present condition of the national park.

4.6 Firewood Fulfilled by the Park

To find out the respondent's perception regarding this issue, they were asked whether the firewood fulfilled by the park. The responses are contained in the table 4.18.

Table No4.18: Firewood fulfilled by the Park

Firewood fulfilled by the park	Frequency	Percentage
Yes	12	27.90%
No	26	60.46%
No idea	5	11.62%
Total	43	100%

Source: Field Survey 2014

Table 4.18 indicates that , 60.46% of the respondents were answered that the park do not fulfill their requirements of firewood while 27.90% of the respondents said that the park fulfill their firewood needs and only 11.62% of the respondents have no idea about the firewood fulfillment by the park because they do not used firewood for the cooking purpose.

4.7 Knowledge about the Park's Rules

In order to find out the respondent's opinion about the park's rules, a question has been asked and the responses are summarized in the table 4.18.

Table No4.19: Respondents know the park's rules

Park's rules	Frequency	Percentage
Yes	24	55.81%
No	17	39.53%
No idea	2	4.65%
Total	43	100%

Source: Field survey 2014

Table 4.19 shows that 55.81% of the respondents were familiar with the park's rules and regulation. 39.53% of the respondents were unknown about the park's rule while 4.65% of the respondents were no answered about the park's rules.

4.8 Area of Conflict

4.8.1 Crops Damage by Wild Animal

Crops damaging are a common phenomenon near the SNP area. The wild animal such as wild boar, monkeys, porcupine, deer, wild dogs etc are the dangerous for the damage of crop. When, the researcher asked respondents about crops damaged by the wild animals. The researcher found the following result, which is shown in table 4.20.

Table No4.20: Crops Damaged by the Wild Animals

Damage crops by wild	Frequency	Percentage
Yes	17	39.53%
No	15	34.88%
No idea	11	25.58%
Total	43	100%

Source: Field Survey 2014

From the above mentioned table, out of 43 respondents, 39.53% of the respondents are suffering from the crops damaged by wild animals, 34.88% of the respondents are not suffering from the wild animals because their land is far from the national park and wild animals do not reach their land to destroy the crops. 25.58% of the respondents have no idea about the crops damaged by the wild animals this because either they have landless or their land is far from the park.

Box 4.1 Cause of the Conflict

The people of Budhanilkantha area are affected mainly by monkey and wild boar comes from the park. They told that the attack of the monkey is severing because they are coming in groups and destroy the crops of large area at a single time. The attack of the wild boar is also danger; they eat the much of the crops. Besides, these they were plugging on the planted from field and uprooted the planted crops. According to the respondent's the frequency of visiting in crops of the wild boar is higher than others. The attack of porcupine is not severing in the study area.

4.8.2 Grazing Problem

A survey was conducted to get the information about the grazing problem of livestock of the respondents near the national park. The information obtained from the field visit is presented below in the table 5.20.

Table No4.20: Problem Faced by the Respondents

Grazing Problem	Frequency	Percentage
Yes	12	27.90%
No	25	58.13%
No livestock	6	13.95%
Total	43	100%

Source: Field survey 2014

Table 4.20 shows that 27.90% of the respondents have grazing problems in this area and 58.13% of the respondents do not have any grazing problems because of few

livestock and they feed their livestock from the fodder/grass of their own farm land 13.95% of the respondents have no live stock in the area.

4.8.3 Opinion of the Respondents Regarding Close to the National Park

The researcher took an opinion survey of the respondents regarding to close the national park. Their responses have been presented in table 4.21.

Table No 4.21: Respondents Opinion to Close the National Park

Park to be closed	Frequency	Percentage
Yes	7	16.27%
No	36	83.72%
Total	43	100%

Source: Field Survey 2014

Table 4.21 shows the majority (83.73%) of the respondents said that they did not want to close park because most of the respondents desire to live nearby the park due to its raising importance and fostering the scope of the tourism and they got pure drinking water in this study area. Only 16.27% of the respondents gave arguments against the national park because they could not take and receive any direct benefit through the tourism business and park authority from the forest resources.

4.8.4 Park's Rule

The researcher put the question, to the respondents living in and around the Shivapuri National Park of Budhanilkantha area, has been facing punishment from the park staff. The detailed information responded by the respondents concerning about the park's rule is confined the figure 4.22.

Table No4.22: Respondents Disobey of the Park's Rule

Disobey the Park's Rule	Frequency	Percentage
No	22	51.16%
Forgiven	7	16.27%
Punished	10	23.25%
No answer	4	9.30%
Total	43	100%

Source: Field Survey 2014

Figure 4.22 show that 51.16% of the respondents have not disobeyed the park's rule because they did not enter the park. 23.25% of the respondents were punished by the park's authority. 16.27% of the respondents were forgiven when they entered in to the park for the fulfillment of their requirements. It relied on the nature of entrance whether it is harmful to flora and fauna or not. They mostly fined Rs.100 to 1000 per person. 9.30% of the respondents were not given answer about disobey of the park's rule because they afraid of the park's staff.

CHAPTER–FIVE

SUMMMARY, CONCLUSION ANDRECOMMENDATIONS

5.1 Summary

After 101 years of word's first national park establishment, in Nepal with the establishment of RCNP in 1973, history of protected area starts. Shivapuri national park (SNP) is a protected area representing the pristine ecosystem in the midhillsof Nepal covering an area of 159 sq.km. Adjoining the 23 VDCs of Kathmandu, Nuwakot andSindhupalchok districts.

The study aimed to find out the respondent's the socio-economic impact of the shivapuri national park on the livelihood of the people living nearby, socio-economic condition of the local people,demand and supply of firewood in Budhanilkantha area, and components of conflicts between the local people and national park. Primary data from Budhanilkantha area has been used in this research study. Altogether 43 respondents were sampled in study. Simple statistical methods have applied for data analysis. The summary of the finding, conclusion and recommendation of this study are mentioned in this chapter.

-) Forty percent of the respondents are male and sixty percent of the respondents are female.
-) Thirty-nine percent of the respondents are bhrahamin, Forty-four percent of the respondents are chhetri and Sixteen percent are janajati.
-) The majority of the respondents 79% are literate. This is satisfied as compared to the distance from the capital city Kathmandu.
-) Twenty-seven percent are engaged in agriculture as their main occupation. Twenty percent of the respondents are students, Eighteen percent are housewife, Twenty-five percent are jobholder +farmer and only Six percent of the respondents have own business.

-) It to Sixty percent of the respondents has less than five ropani of each land also getting difficult to survive only from its products.
-) The majority of the respondents 34% have monthly income between Rs 1500-2000 each which constitutes good earning in comparison to other respondents.
-) Out of 89 livestock's, most of the respondents (54%) were keeping goats and cow and s because it is easy to keep and feed them.
-) Sixty-seven percent collect fodder and grass from the farm land because it is hard to enter in the park for collection of fodder and grass.
-) Forty-seven percent of the respondents said that forest has been sparse before establishment of the national park.
-) The majority of the respondents 16% were full dependent upon the firewood for their fuel requirement and Sixty-nine percent are used gas/firewood.
-) Most of the respondents, 42% have used firewood less than 10 kg per day for cooking food.
-) Thirty-four percent were not collected firewood from the park because they did not use wood as fuel.
-) Nine percent have no idea about the collection of firewood from the park is convenient or hard.
-) Nearly 65% of the respondents were not selling firewood in the market because the firewood is not sufficient for their own uses.
-) Forty-two percent of the respondents said that there were no changes in the living style after the establishment of national park.
-) The majority (88%) of the respondents have the positive attitude about the incensement of tourist after the establishment of the national park.
-) Seventy-six percent were said that there was no change in local economy after the establishment of the national park.

-) Sixty percent of the respondents were answered that the park does not fulfil their requirement of firewood.
-) The majority (55%) of the respondents were known about the park's rules.
-) Thirty-four percent of the respondents are not suffering from the wild animals because their land is far from the national park and wild animals do not reach in their land to destroy the crops.
-) Fifty-eight percent of the respondents do not have any grazing problems because of few livestock and they fed their livestock from their own farm land.
-) Most of the respondents (83%) said that they did not want to close park because most of the respondents desire to live nearby the park due to its raising importance and fostering the scope of the tourism and they got pure drinking water.
-) A large number (51%) of the respondents have not disobeyed the park's rule because they did not enter the park.

5.2 Conclusion

On the basis of the above findings, it had been concluded that the majority of the respondents are satisfied with the establishment of the Shivapuri National park but the local people living in and around the Shivapuri National park have no legal access in all available natural resources as their demand although quality is in good condition and has reasonable distance for resource.

Livestock rearing is one of the main sources of income of the local people. Although, fodder/grass and grazing have been banned by the park. Two third of the respondents are collecting fodder/grass from the farm land. The demand of firewood of the people for energy did not fulfill by the park. Sometimes, people had stolen the firewood and fodder/grass from park.

Hence, livestock grazing, crops damage by wild animals and band in resource collection are the main areas of conflicts between the park authority and local people in the study areas.

If the livelihood of the local people becomes less vulnerable or no vulnerable, then only park and protected area can get success to protect the natural biodiversity in sustainable way. The future of any park and protected area depend very much on knowledge and capacity to manage.

5.3 Recommendation

This is a case study type research primarily designed for a fulfillment of partial requirement of master's Degree in anthropology might not be enough to provide universal recommendations or suggestions. Hence based of the findings of the case studies of Budhanilkhatha VDCs, some recommendations, which are presented for the consideration of concerned authorities and institutions, are as follows:

-) Local people should be encouraged to change their traditional occupation .government should be trained them in other income generating activities like bee-keeping, fish farming, poultry farming, and tourism industries.
-) Provide forest resources to the local people with the certain costs to the fodder and grass though which they are benefitted as well as park staff is generating the income.
-) Most of the local people living around the park are illiterates they have lack of awareness about conservation, bio-diversity, and the national illiterate local people is very important program of adult literacy to being the awareness of conservation and national park among the illiterate local people is very important. An emphasis should also be encouraged to visit the park and take part in activities.
-) The boundary wall surrounding the national park should be continually maintained.
-) For Park and people conflict resolution a separate SHNPreulation should be promulgated. This new regulation will provide the basic need of forest recourses for local people.

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APPENDIX-I

Master Degree in Rural Development (CDRD)

Tribhuvan University

Study on:

Socio-economic relationship with protected area

(A case study of Shivapuri National Park, Budhanilkantha, Kathmandu)

Date of interview.....

District.....

Village/Tole.....

Ward No.....

Name of Respondent.....

Type of Family

A) Nuclear

B) joint

Description of Households Members

S.N	Name of the family member	Sex	Age	Education	Marital status	Occupation
1						
2						
3						
4						
5						
6						
7						
8						
9						

A) Demographic and Socio-Economic Condition

1) What type of land do you have?

Land type	Area
Cultivate	
Non-Cultivate	

2) How much land do you have?

Less than 1 ropani	
Less than 5 ropani	
Less than 10 ropani	
No idea	

3) Monthly income (Rs.)

5000-10,000	
10,000-15,000	
15,000-20,000	
20,000 above	
No answer	

4) Do you have livestock?

Livestock Type	Number
Cows	
Goats	
Cows and Goat	
No livestock	

B) Natural Accessibility

1) From where do you collect the fodder/grass?

Before establishment of SNP	After establishment of SNP
Farmland	Farmland
National park	National park
SNP/Farmland	SNP/Farmland
No idea	No idea

2) From where do you collect the firewood?

Before establishment of SNP	After establishment of SNP
Community forest	Community forest
SNP	SNP
Farmland	Farmland

3) What type of wood was using for energy purpose?

- a) Firewood b) Gas c) Firewood /Gas

4) How much wood do you need per day for cooking purpose?

- a) Less than 5 kg b) Less than 10 kg c) Less than 15 kg

5) How much firewood would you collect from the park in a day?

- a) Less than 10 kg b) Less than 20 kg c) Less than 25 kg

6) Do you find convenient to get firewood after establishment of SNP?

- a) Easy [] b) Hard [] c) No idea []

7) Do you sell firewood and timber in the market?

- a) Yes [] b) No [] c) No answer []

C) Perception of Respondent about the National park

1) Has your living condition improved after the establishment of Shivapuri National park?

a) Yes [] b) No [] c) No idea []

2) Has the tourist number increased after the park was established?

a) Yes [] b) No [] c) No idea []

3) Are there any changes in the local economy after the implementation of SNP in your village? If yes, mention the changes.

a) Yes [] b) No [] c) No idea []

4) Does Shivapuri National park helps to increase your income level?

a) Yes [] b) No []

5) Are you satisfied with present condition of Shivapuri national park?

a) Yes [] b) No []

6) Is your firewood requirement fulfilment from the park?

a) Yes [] b) No [] c) No idea []

7) If you sell how much per month?

a) Yes [] b) No [] c) No idea []

8) How much money do you earn from that sale?

9) Do you know about the park's rule?

a) Yes [] b) No []

10) What kind of help do you get from the Shivapuri National park authority?

11) How is the relationship between the park staff and the local people?

12) Do you think that the park rule has to be changed?

D) Areas of Conflict

1) Is your land or crops affected by rivers, droughts or wild animals?

- a) Yes [] b) No []

2) Do you have grazing problem?

- a) Yes [] b) No []

3) Which is the season in which livestock grazing problem is most critical?

- a) Winter b) Summer c) Mon soon

4) Do you want the park to be closed?

- a) Yes [] b) No []

5) If you disobey the park rules and cut the wood is you punished or forgiven by park staff?
