

CHAPTER –I

INTRODUCTION

1.1 Background

Nepal is a beautiful country with snow-clad mountains, ice-cold torrents and green vistas. It is situated in southeastern part of Asia between two giant nations China and India. It is a country of numerous and diverse villages having three distinct ecological regions running from south to north namely Terai, Hill and Mountain. It is located between 26⁰22 to 30⁰27 north latitudes and 80⁰4 to 88⁰12 east longitudes. It covers an area of 1, 47,181 sq. km. with 885 km east –west length and 193 km mean width. Its population is 2, 31, and 51,423 (CBS, 2001:1). About 80 percent of total population is living in rural areas and 31% people are under poverty line. The per capita income of Nepalese people is \$250 per annum. The gap between haves and have not is rapidly increasing.

This small and beautiful country Nepal is very rich in natural resources. It has 8 highest mountain peaks among 14 peaks including the highest peak Mt. Everest (8848m). Nepal has immensely diverse and undulating topography varied climate and mix of people that combine to produce a magical attraction for the outsiders. Walking in the interior of the country follows ancient foot trails which meander through the scenic rivers intricately terraced fields and forested ridge connecting picturesque hamlets and mountain village. For the nature lovers and pleasure seekers, Nepal can provide many attractions. The sight seeing jungle safari trekking, whitewater rafting, sport fishing, mountaineering, mountain hiking sharing are the happy and joyful life patterns of simple and friendly ethnic people. Therefore, Nepal can be symbolized as a country of unity in diversity.

a. History of Tourism in Nepal

Nepal was long under the rule of an autocratic system that fearing foreign interference kept the door closed to foreigners, except a very few British individuals who came for wildlife exploration and hunting. In the modern sense, tourism started in Nepal only after democracy

was initiated in the 1950s, when Nepal's frontiers were opened for foreigners, the airport was built and the Tribhuvan highway constructed.

Tourists visiting during the 50s were primarily motivated by the natural attractions, especially the highest mountain peaks such as Mount Everest (Sagarmatha). The first visitors, group of mountaineers and expeditioneers, were brought to Nepal in 1955, by Thomas Cook. Once in the country, they were captivated by the friendliness of the Nepalese people fascinating arts and culture. On return to their homes, they started their discoveries with other western people and thus served as messengers for Nepal's immense cultural heritage. In the same way, visitors have continued to influence a change from nature tourism to culture tourism. Tourists visiting Nepal during the 1960s were motivated by Nepal's indigenous people and culture. The tourism package to Nepal was most often part of a trip to India, and the main sites visited were situated in the Kathmandu valley. The first Tourism Act was endorsed in 1964.

In the mid 1960s, there was an accommodation boom, with the construction of many of hotels. A large influx of hippies and "flower –power" tourists followed from the end of the 60s until 1975. They were exploring spiritually, different cultural perceptions and various low budget tourism activities, although in 1970 still only 1% of tourists came for 'trekking'. New areas became popular, like Pokhara and Lumbini (for international pilgrimage). The Department of Tourism was established at the beginning of the 1970s, and a Tourism Master Plan formulated concentrating on promotion of tourism, identification of tourism potential and establishment of Tourism Information Centers. In 1973 the first protected area Chitwan National Park was established. Private tourism entrepreneurs had already begun exploiting the Terai area for wildlife observation and hunting before this. The first Safari lodge in the area was established by the Tiger Mountain Company in 1963.

In the ten years after the coronation of king Birendra in 1975, tourism arrivals doubled from 92000 to 223,000, about 13.15% of whom come for trekking. The numbers of hotel rooms increased from 1663 in 1975 to a total of 6800 in 1980. in 1976 the Sagarmatha National Park and the world Heritage Sites in Kathmandu were established. The Department of

National Parks and Wildlife conservation became a stakeholder in tourism development. However, implementation of tourism plans during this period was slow or non-existent.

The establishment of the Annapurna Conservation Area (ACA) in 1986 and the initiation of Integrated Community Development projects marked the first linkages between conservation, community participation and tourism. However, product diversification in tourism was slow. The main tourist attractions and activities in Nepal at the end of the 1980s were;

-) Cultural tourism in Kathmandu valley
-) Trekking in the high mountains
-) Rafting the rivers
-) Wildlife tourism
-) Pilgrimage to religious sites (Pashupatinath, Lumbini and Muktinath)

With the return of democracy in 1991, several remote areas were opened up for tourism. Democratic freedom enabled the establishment of more private businesses, and tourism business was booming. The trekking industry was a particular growth area, attracting up to 25% of the total tourist numbers. There was increased involvement of conservation and development organizations in tourism, using livelihood development approaches but a lack of coordination between them. The National Tourism Policy was written in 1995, and 1998 was celebrated as “Visit Nepal Year” as a promotion of Nepal. At the end of the 1998 the Nepal Tourism Board was established as a private –public partnership. The year 1999 saw the highest number for tourists in Nepal and one year later the highest number of trekkers.

The years after 2000 saw a decline in tourist arrivals, which is related to the internal conflict. Security became an issue of concern. At the same time the 10th National Development Plan identified tourism as an economic opportunity for poverty alleviation. The Tourism for Rural Poverty Alleviation Program was designed as a model for the implementation of sustainable pro-poor tourism development. In the year 2006 the peace accord was done then only the tourism sector got rapid progress. In 2007 the highest number of tourists was seen in the history of Nepal (Nepal Tourism Statistics, 2007).

b. Eco- tourism in Nepal

Eco-tourism, mass tourism, village tourism, agro-tourism, cultural tourism, pilgrimage tourism, sustainable tourism etc. is how tourism is divided. Although eco-tourism is not a new concept in Nepal, people oriented management plans for the sustainable use of natural resources and cultural assets are being emphasized in order to chhannalize benefits to the affected communities (Bhandari, 1997). In eco-tourism not only the activities of the tourists are involved but also elements such as the conservation of eco-system and sustainable development (Kunwar, 1997). It is a catchy word meaning with ecologically sound tourism or nature tourism. So, it is a force to sustain natural resources in any area.

Eco-tourism can be summarized as a term of cultural and environmental ethic among travelers that contributes to the conservation and management of natural areas for long-term leading to sustainable economic development. This shows that eco-tourism is very much advantageous approach of tourism development for developing countries. It attracts persons who are tolerant and even interested in experiencing small scale, locally operated accommodations, and built by local people with local materials. It emphasizes the employment of local people. Its advocacy is to “respect” to nature, local people, history, community, aspiration and tourists themselves.

Based on past experience eco-tourism development in Nepal can be viewed from two perspectives, viz. projects conceived and developed as eco-tourism projects such as Ghalegaun – Sikles eco-tourism project and initiatives that consist strong eco-tourism components such as in most protected areas. There are other initiatives that do not mention explicitly an association with eco-tourism but since they embrace principles for eco-tourism they too are considered as a contribution to the development of eco-tourism. Therefore, the discussion on eco-tourism in Nepal is of great important both for rapid economic and sustainable development.

c. Phewa Lakeside

The name “Pokhara” may have been derived from the word “Pokhari”. “Pokhari” in Nepali means a lake or loch and Pokhara derives its name from the numerous Tals in the region (Lamsal, 1997).

The Phewa Lake is the main attraction for tourism in Pokhara. This lake is situated in the northwest of Pokhara Sub-metropolitan City at an altitude of 742 from the sea level. The lake is attached with the city. Phewa Lake is the second largest lake after the Rara Lake. The lake has been widely renowned for the tourism and its multipurpose utilization. Some of the other benefits of the lake are boating, fisheries, electricity generation etc.

Phewa watershed covers more than 110 km² area in Kaski district, Gandaki Zone of the Western Development Region (28^o11 39 - 28^o 17 25 N latitude and 83^o 47 51 -83^o 59 17 E longitudes). The lake is located in the northwest to southeast of Pokhara town at elevation of about 742 meter. It extends about four kilometer from northwest to southeast and measures two kilometer at the widest and only about hundred meters at narrowest. The elevation ranges from 742 meter at the lake to 2,508.81 meter at Panchace peak. Thus, the vertical distance is about 1,715.73 meter at latitudinal distance about the seventeen kilometer. Seventy percentage of the watershed area has slopes between 20% and 60% with an average slope of 40%. Elevation percentage has a slope of 0% to 10% and 15% is very steep 75% to 100% some portions have slopes greater than 100% most of very steep slopes occur in the southern part of the lake, which and are mainly forested. Because of the phyllites, weak structure and deep slope situation; northern part causes down ward movement of soil and rock. It is geologically the most susceptible to erosion. The southern part of watershed area doesn't have erosion problem but common to the northern part. The floor of the lake is primarily composed of coarse sand (Fleming, 1983).

As described earlier that the Phewa lake is the main attraction of Pokhara, most of the hotel and lodge, restaurants, travel and trekking agencies and tourists related shops and business are situated in the bank or at the side of the lake. so this area is called “lakeside” in Pokhara.

Another attraction of lake is the Barahi temple in the center of the lake. It generates employment directly to boatmen as well.

1.2 Statement of the Problem

Population is being increasing day by day but we have the limited natural resources whereas those resources are not only for the present population. Those resources which we are using have to be used by the future generations. To maintain the check and balance relationship between present population's aspirations and the carrying capacity of natural environment, certain precautions and behavioral changes are needed.

Tourism is the most sensitive industry and requires awareness among the people for its prospects. Especially eco-tourism plays an important role in sustainable development promoting good environment and ecology. Therefore, it is necessary to protect and promote those areas or sites of Nepal which are being popular for the tourism, especially mountainous and naturally beautiful areas. In this context, it is an urgent need to conserve Phewa Lake from the pollution , and encroachment of the local residential as well as siltation process, otherwise, we may be failed to hand over this natural gift to our future generations. If we conserve the beautiful and popular lakes, then after we will get socio-economic, ecological and environmental benefits in sustainable manner. Phewa Lake is being very much potential destination for the tourists because of its unique characteristics like surrounding mountains with green forest, lap of magnificent Himalayan range, purity of water, wildlife, existing of a temple in the middle of Lake, peace and tranquility etc.

Tourism industry is comparatively smokeless and less polluted industry. It improves the economic status of local people as well as the nation. For the regulation of this industry and maintain the natural beauty research studies are to be carried out as it is related to the protection and promotion practices. Thus, it was advantageous for natural environment protection and tourism promotion.

1.3 Objectives of the Study

The general objective of this study was to harmonize tourism and environment. The specific objectives were:

1. To assess the condition of natural resources.
2. To identify the significance of eco-tourism in the context of local development.
3. To recommend the ways to harmonize tourism with environment.

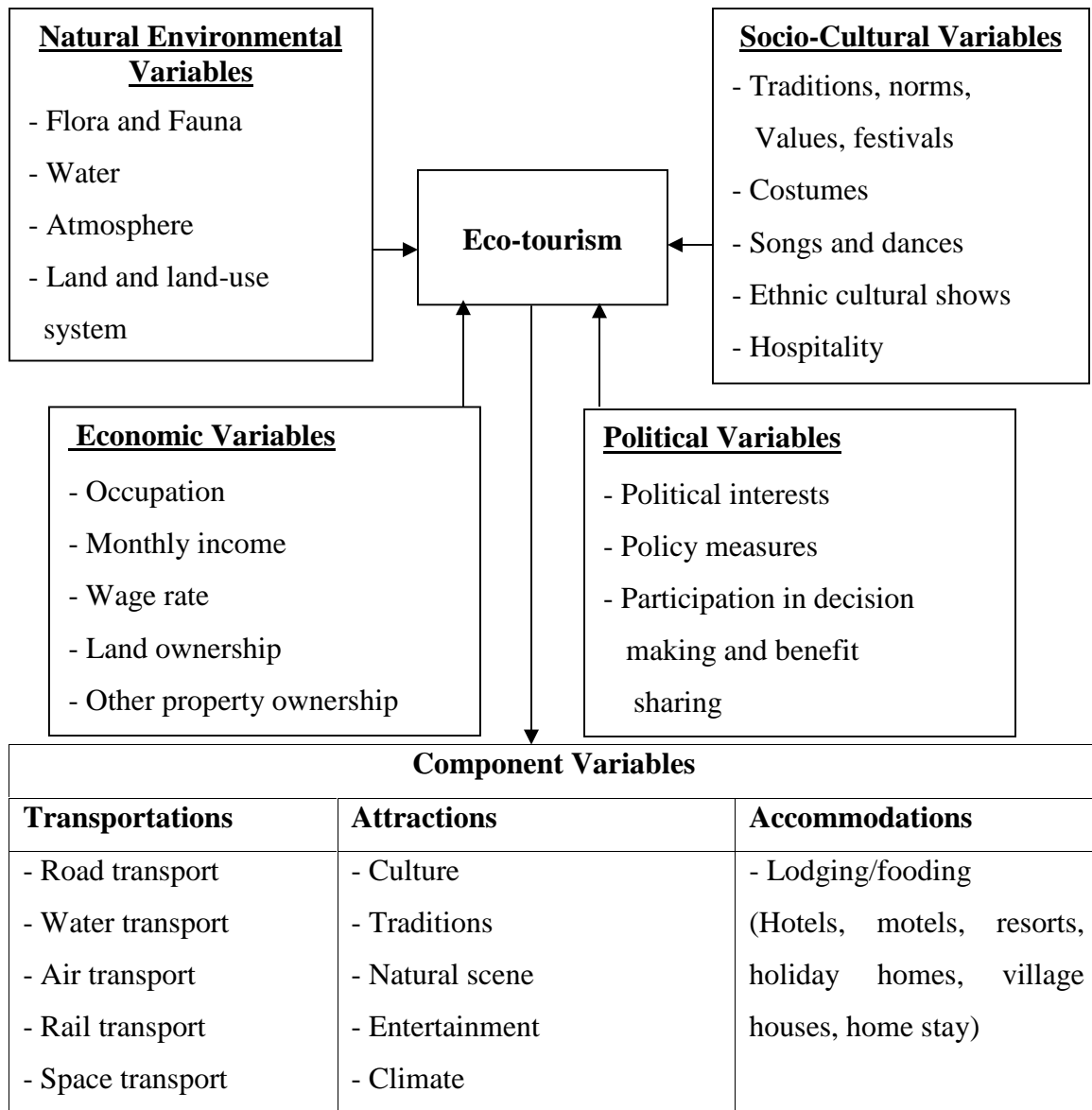
1.4 Significance of the Study

No doubt, eco-tourism is much suitable for Nepalese context. Nepal is a mountainous country where agriculture is one of the important professions of Nepalese people. Natural surroundings are the main features of Nepal which are also the key elements of eco-tourism. Today, tourism being a major and important industry as a source of foreign exchange has an important role in economic development of the least developed countries, like Nepal.

This study has been examined the state of environment in Phewa Lakeside and recommended the positive aspects as well as those aspects which were to be improved. Many studies done on the problems and prospects of tourism had drawn the positive impacts on economy but not are so much concerned with the environment of this area. This study is important for investigating the changes in natural environment of lake side. This study was also be able to assess the impact of tourism activities in the area under study, both human and natural environment which were of more important for recommending to the plan and policy makers to formulate appropriate plans for further promotion of the similar areas of the nation.

1.5 Conceptual Framework

Table 1.1 : Conceptual Framework



1.6 Limitations of the Study

This present study has been based on and limited to the tourism area of Phewa Lakeside Pokhara of Kaski district. The study is as a case study. So, the conclusions drawn from this study was mere indicative rather than conclusive. The conclusions could not be generalized for the whole. But, the inferences might be valid to some extent to those areas which have similar geographical and environmental settings.

1.7 Organization of the Study

The study is organized into seven chapters. The first chapter deals with introduction, second literature review, third research methodology, fourth with setting of the study area, fifth with data presentation and analysis and the sixth with summary, conclusion and recommendations respectively.

For the first chapter of introductory part which includes background of the study, statement of the problem, objective of the study, significance of the study, conceptual framework, and organization of the study and the limitations of the study. The second chapter includes literature review.

In the third chapter, rationale of the selection of the study area, research design, nature and source of data, universe and sampling, data collection techniques, data processing and analysis are described.

In the fourth chapter setting of the study area has been presented. This consists of geographic and climatic characteristics, flora and fauna, people culture and traditions, infrastructures, emerging environmental problems in Phewa Lakeside and conservation practices are included.

In the fifth chapter, presentation and analysis of the data has been presented. This consists of structure and analysis of data, occupational satisfaction of the respondents, traditional rites and rituals, dressing pattern, housing pattern, family pattern, investment pattern, duration length of stay of tourists, employment generation, tourist season, major sources of tourist attractions and arrivals trend of tourist in Nepal and Pokhara are presented.

In the sixth chapter the summary, conclusion and recommendation of the research study has been presented.

CHAPTER-II

REVIEW OF LITERATURE

2.1 Introduction

In Nepal, tourism as an industry has not any old history. Interest from the international tourist began after 1950. After the advent of democracy in 1951 Nepal followed an open door policy. Consequently, on May 29, 1953 late Mr. Tenjing Norgay and Mr. Edmund Hillary Scaled Mt. Everest and world's attention was focused to Nepal and subsequently a tourism industry began to boom. (Jha, 1999) indicates that development of tourism accelerated in Nepal after establishment of Nepal Tourism Committee in 1970. Nepal Tourism Master Plan was prepared in 1972, followed by establishment of Ministry of Tourism by Government of Nepal in 1973 in order to institutionalize the industry.

Visible to all, Nepal's natural attraction resulting from physical, historical, cultural movements and temples, art treasures and festivals and its wildlife are the best attractions for the foreign visitors. Nepal Himalayas and their scenic beauty are also the prominent attractions to the visitors. Nepal is the country of Mount Everest, the land of yeti, and the land of Buddha. It has various snow- peaked mountains, rivers and lakes, conducive climate and mysterious charms are inviting the visitors of the world. Cultural, religious and natural resources are the three major attractions of Nepal which have eight cultural and two natural World Heritage Sites. It offers nature based tourism activities like trekking, mountaineering, rafting and wildlife sanctuaries as well as culture and people based and man made attractions (Shrestha, 2000). Considering the historical background, geographical situation and socio-cultural wealth, there are enormous tourist potentialities in Nepal and the tourism industry has been playing a significant role in the country's economy. (Shrestha, 1978) views that people from both east and west are attracted to visit Nepal due to having all important ingredients for tourism development.

Literatures related to tourism potentialities and benefits in Nepal. Kunwar (1997), emphasizes that tourism can be the best industry for the economic growth and human development in the country like Nepal. The diversity of geographical belts has made Nepal useful and attractive to tourists. This uniqueness of physical features of the country has given a wide range of tourist activities from visiting jungle resort camps to the snow-capped mountains.

It has been calculated that so far average tourist stay in Nepal is of 12 days. But it can be extended further through opening special local tourism sites. There are many unexplored fascinating places having tourist importance. Oli and Baral (1996), have attempted to highlight some such areas of Lamjung district. In Nepal, tourism mostly involved traveling to relatively undisturbed natural area with the specific objectives of admiring, studying and enjoying the landscape, its wild plants and animals as well as cultural features in these areas (WTO, 1994).

Nepal's combination of world class cultural and natural tourism attractions is well suited for international tourism. Tourism has established itself as a major contributor to Nepal's economy (NTB, 2001). In Nepal, tourism is important not only because it is an important source of foreign exchange but also it is a major employment generating industry (Kunwar, 1997). Tourism provides direct and indirect employment for over 25000 people and contributes four percent of GDP. So the tourism sector is considered by GON as a key to strengthening the national economy, improving living standards and reducing poverty, as well as helping preserve cultural and traditional and historic monuments (NTB, 2001). But the earnings from tourists are highly uncertain being the subject to wide fluctuations as a result of economic recessions, famine and political disturbance around the world. However, for a country like Nepal which does not have abundant resources, the tourism sector is expected to continue to play an important role but without any negative impacts (Kunwar, 1997).

Nepal considered being ill-equipped to provide the kind of amenities that mass tourists expect, nor does it offer the kinds of "Sun and Surf" diversion that enclave resorts provide

for tourists elsewhere in the tropical world. Recognizing its limitations for conventional mass tourism, the country's tourism industry seeks to attract other types of tourist. Pleasure-seeking visitors to Nepal still dominate the tourist arrivals, but each year more tourists come to Nepal to participate in more daring forms of tourism. Mountain trekking is the most important of these activities, followed by wildlife viewing in the Terai animal parks and white water rafting on Nepal's rural areas and to define entirely new socio-economic agendas for the country (Zurick, 1992). In promoting such forms of tourism, Nepal follows the global tourism trends set in the 1980s and 1990s that identify alternative types of tourism, which presumably limit the negative effects of economic activity on local environments and cultures. The alternative models view tourism as a means of promoting environmental protection and meaningful cultural interaction while still achieving significant economic growth. Such models assume different names, but are called ethnic tourism when the focus is on cultural observation and nature tourism (Whelan, 1991). In Nepal, these two primary agendas are often combined and are referred to collectively as adventure travel or eco-tourism (Chauhan, 2004).

2.2 The Concept of Eco-tourism

The term 'eco-tourism' is defined as traveling to relatively undisturbed or un-contaminated natural areas with specific objectives such as studying, admiring and enjoying the scenery with its flora and fauna as well as any existing cultural manifestations (both past and present) found in these areas. By this definition, nature-oriented tourism implies a scientific, aesthetic or philosophical approach to travel, although the ecologically motivated tourists need not to be a professional scientists, artists or philosophers. The main feature of such tourism is that the person who practices eco-tourism has the opportunity of immersing himself/herself in nature in a manner generally not available in the urban environment (Boo, 1990).

Eco-tourism is assessed from various perspectives. According to Scace (1993), nature travel is an experience that contributes to conservation of the environment while maintaining and enhancing the integrity of the natural and socio-cultural elements. He presents it as a new tourism strategy that balances development and economic gains by stimulating local

economies. It is seen as a new force that can benefit both nature and developing destinations, while it is also expected to be simply a travel to enjoy and appreciate nature (Ross and Wall, 1999).

Eco-tourism is also seen as an interfacing of conservation concerns and tourism interests, setting free the synergy required to jointly preserve the quality of the environment while protecting nature and promoting tourism. It is a timely strategy that is vital to the maintenance of healthy eco-systems along with economic benefits to any host area communities. Therefore, eco-tourism has been viewed as a new tourism strategy that balances development and economic gains by benefiting both nature and destination areas (Fillion, 1994).

“Eco- tourism promotes a code of ethics in relation to other species that grants rights of continued existence to those species; it promotes non –destructive, aesthetic, spiritual values. And it actually does something for wildlife in so far as it provides humans with an economic and moral incentive to set aside and maintain space (habitat) for wildlife and it discourages harassment” (Gauthier, 1993).

Eco-tourism differs from other forms of tourism particularly due to the opportunity for observation and learning it provides to tourists and its contribution to cultural conservation and long term sustainability of communities and natural resources. Therefore, it is a form of sustainable tourism that benefits the community, environment and local economy. This may be achieved through various means such as employment for local people or programs where tourists contribute money or labor to community activities such as tree planting or conservation of local monuments or sites (SNV, 2003).

2.3 History and Birth of Eco-tourism

The history of nature travel is traced back to Aristotle who is known to have traveled to the island of Lesbos in the Aegean Sea where he spent time studying marine creatures. Nature travel during the 19th century was essentially a quest for spectacular and unique scenery. This

was also the time when the concept of National Parks came in to being. The founders of National Parks wanted to protect the environment but it was the tourists inside the national parks who “provided the economic and political rationale needed to translate philosophy into accomplishment” (Lamsal, 1997).

“The restoration of peace after the Second World War appealed and opened the world market for travel throughout the world and this was the reason for explosion of tourism. This opportunity not only helped to establish tourism as one of the most important industries but it also became cause for deterioration of the early image of tourism. During the fifties and sixties Americans who formed an important segment of the world tourists were known for their insensitive behavior towards nature and culture of the destination they were visiting. They were recognized as ‘ugly tourist’. During the seventies, the Germans appeared as ‘ugly tourists’ followed by Japanese in the nineties. The ‘ugly tourist’ phenomenon does not come from actual personality traits. It is the feeling and experience brought about by the cultural and social invasion by visitors who are different from the host community. More recently, the ‘ugly tourism’ phenomenon continues with uncontrolled tourism development and variation in cultural and societal values in the destination areas where tourism thrives” (Butler, 1992).

The concept of eco-tourism is also rooted in the environmental concerns raised by industrial development in Europe during the sixties. The unprecedented industrial development essentially raised awareness regarding environmental conservation and conservation organizations that came into being demanded that governments set aside a landmass not just for tourism purposes but for preservation of eco-system integrity. The whale conservation movement during the second half of the sixties was an example of such a campaign and this period marked the birth of eco-tourism with the unprecedented development in transportation, even travel to most inaccessible areas is now feasible. Therefore, eco-tourism today is not confined to popular national parks but has expanded to include even the most remote parts of the earth (Butler, 1992).

However, actual nature tourism began in Costa Rica in the early eighties. The word ‘eco-tourism’ was first coined by a Costa Rican tour operator while registering his business, which

soon became a popular word and frequently appeared in the literatures in Costa Rica (Kunwar, 1997). But the 'eco-tourism' phenomenon became more prominent and came into a wide use after Hector Ceballos Lascurain published an article in 1987 with definition of eco-tourism. He described eco-tourism as nature based travel to relatively undisturbed areas with focus on education. It was then formally recognized by the 1989 Hague Declaration on Tourism that advocated rational management of tourism to contribute to the protection and preservation of the natural and cultural environment. Since then eco-tourism has increasingly become a popular word for academics, professionals and businessmen.

The decade of 1990s saw a remarkable growth in eco-tourism. Various countries adopted and started eco-tourism projects. In an attempt to emphasize the importance of eco-tourism, the United Nations declared 2002 as the 'International Year of Eco-tourism' which with 18 preparatory meetings in Asia, Europe and Australia finally concluded in Quebec, Canada with a 15- point declaration.

2.4 Principles of Eco-tourism

Scholars have defined eco-tourism in various ways, although the essence of each definition is more or less the same. The characteristics of eco-tourists and principles of eco-tourism have been also described. The principles of eco-tourism developed by the International Eco-tourism Society (IES) are presented hereunder (Shrestha and Walinga, 2003):

-) Avoids negative impacts that can damage or destroy the integrity or character of the natural or cultural environments being visited.
-) Educates the traveler on the importance of conservation.
-) Directs revenues to the conservation of natural areas and the management of protected areas.
-) Brings economic benefits to local communities and directs revenues to local people living adjacent to protected areas.

-) Emphasizes the need for planning and sustainable growth of the tourism industry, and seeks to ensure that tourism development doesn't exceed the social and environmental 'carrying capacity'.
-) Retains a high percentage of revenues in the host country by stressing the use of locally owned facilities and services.
-) Increasingly relies on infrastructure that has been developed sensitively in harmony with the environment-minimizing use of fossil fuels conserving local plants and wildlife, and blending with the natural environment.

Other authors have described eco-tourism principles differently but the essences of these principles (Blamey, 2000; Dhakal and Dahal, 2000) are not too different from those mentioned above:

-) It should not negatively impact the resource that helps to develop eco-tourism in any destination. Rather it should be developed in an environmentally friendly manner.
-) It should provide benefits to all parties - local natural resources, people and the tourism industry - with a stake in eco-tourism.
-) It should extend first - hand information to visitors.
-) It should provide educational opportunities for all parties - local communities, government, NGOs, industry and tourists.
-) It should encourage all - party recognition of the intrinsic values of the resource.
-) It should involve acceptance of the resource on its own terms and in recognition of its own limits.
-) It should promote understanding and partnerships between many players which could involve government, NGOs, industry, scientists and locals.
-) It should promote moral and ethical responsibilities and behavior towards the natural and cultural environment by all players.

2.5 Benefits of Eco-tourism

In developed countries, mass tourism had caused many social ills viz. alcoholism, commercialization of sex, organic diseases and social crimes. In developing countries, tourism has accelerated begging problem, and some beggars have under taken it as a profession. Tourism has also brought changes in the life style of local people, and they loose their adherence and attraction towards their own heritage (Jha, 1999). Indeed, overuse, resulting in degradation of the environment, loss of economic benefits due to damage to the resource or the local community, and disruption of local cultures or values, are often cited as drawbacks to eco-tourism. But if tourism is damaging a natural resource, then it is not eco-tourism. True eco-tourism can in fact be one of the most powerful tools for protecting the environment.

There are ample benefits of eco-tourism. It can provide income and employment contributing to development, enabling public enjoyment and understanding, and it also can justify nature protection (Jha, 1999). Eco-tourism potentially offers national, regional and total economic benefits similar to those of other types of tourism activity. Full economic potential at different aspects of economy is yet to be substantiated by specific studies (Ziffer, 1989).

A new concept, called eco-tourism, has emerged as a replacement to mass tourism as a way to reduce adverse impact on nature. Eco-tourism is a response to the negative effect that mass tourism has had on the culture and geography of countries. In reality, eco-tourism is a culturally and environmentally sensitive travel that contributes to conservation and management of natural areas for sustainable economic development (Gurung, 1997).

Developing eco-tourism product requires minimal impact and ecologically sustainable approaches to tourism planning development and management. Community participation in decision-making, planning and participatory techniques at a grass-roots level are the key methodologies evolved in Nepal for eco-tourism development (NTB, 2001).

In recent years a specific category of nature based tourism has developed along these lines, “Ecological-tourism”, or “eco-tourism” as defined by IUCN. Eco-tourism program is ‘environmentally responsible travel and visitation to relatively undisturbed natural areas, in order to enjoy and appreciate nature (and any accompanying cultural features both past and present) that promotes conservation, has low visitor impact, and provides for beneficially active socio-economic involvement of local populations. The eco-tourism society’s definition is similar; “eco-tourism is responsible travel to natural areas that conserves the environment and sustains the well-being of local people” (Blangy and Wood, 1992).

Eco-tourism is viewed as a tool not only to create distinctive tourism products but also to improve the livelihoods of local people. Key successes include getting the government to collect entry fees from trekkers visiting the Annapurna region and using either part or all of these funds to create an endowment fund that has been ploughed back into local conservation and development efforts. This has improved local livelihoods through expenditure on improving schools, drinking water, trails, electricity and so forth, as well as increasing local confidence. In addition to such community development programs, tourism revenues has been used as an important leverage for promoting alternative sources of energy , for trainings and awareness programs, the provision of soft loans to build proper facilities and other actions that have made possible the development of eco-lodges in the Annapurna region (Gurung, 1995).

2.6 Popularity of Eco-tourism in Nepal

The literature speaking about mass tourism that exploded in the 20th century; another type of tourist emerged in a smaller way-but with a different reputation. During the sixties, public concern (mainly in industrialized countries) about the environment increased conservation organizations were formed to lobby governments to set aside land not just for tourists or for certain animals, but to preserve the natural integrity of whole in eco-systems. The whale-watching industry in the USA developed at this time in response to a concern about the worldwide depletion in whale populations. By 1966, publicity from these activities and from

scientists created enough public pressure that the protected species, followed by protection of the blue whale in 1967. This period makes the birth of the eco-tourism (Butler, 1992).

In the context of Nepal, ACAP has been evolving as a successful example of eco-tourism. The program has changed the traditional subsistence activities into a framework of sound resource management, supplement by conservation and development of alternative energy programs to minimize the negative impact of tourism and to enhance the living standards of the local people (Nirola, 2003). The pressure on Nepal to expand its tourism base predicts the opening of new tourist places. ACAP recently extended its area coverage to include the formerly closed Mustang boarder region (Chauhan, 2004).

ACAP believes that conservation and development can be complementary to each other. ACAP has set the following three objectives.

1. Conserve the natural resources of ACA for the benefit of the present and future generations.
2. Bring sustainable social and economic development to the local people.
3. Develop tourism in such a way that it will have minimum negative impact on the natural, socio- cultural and economic environments.

ACAP'S Goal includes achievement of sustained balance between nature conservation and socio-economic improvement in the Annapurna Conservation Area (ACA).

The management of environmentally sound tourism is a significant aspect of the ACAP. Sustainable tourism management of ACAP is directed towards:

-) Protecting the natural environment and cultures.
-) Improving the socio-economic status of the locals by creating employment and income.
-) Educating tourist operators in conservation and sanitation issues.
-) Providing visitors with a truly rewarding experience in tourism.

Destination Nepal Campaign (DNC), 2002-2003 focused on tourist resources development, religious and cultural tourist promotion as well as organizing tourism awareness programs incorporated with the DNC are the 'International Year of Mountains 2002', 'Mt. Everest Golden Jubilee Celebrations 2002-2003', 'Commemorating the first conquest of Mt. Everest in 1953 by late Sir Edmund Hillary and Tenzing Norgay Sherpa' and 'International Year of Eco-tourism'. The major objectives of DNC included;

-) Creating massive awareness about tourism inside the country.
-) To enhance and re-established the image of Nepal as a safe reliable and attractive travel destination by effective international marketing and promotion.
-) To make necessary improvements in government's various policy and structural levels for making it compatible to the current need and for the sustainable, integrated and coordinated development of the tourism sector.

2.7 Eco- tourism in Phewa Lakeside

Phewa Lakeside is a micro-region of the hills of Nepal. Among the three sub- divisions of the hilly region like the Midland the Mahabharata Lekh and the Churia Ranges, the study area which is located in the western part of the Pokhara valley comes under the midland region of central Nepal. It occupies the ample topographical disparities that begin from the highest peak named Panchase (2508.81m) and reaches nearly the South-western sector of the Pokhara valley attaining the average elevation of 742m on the surface of the lake. Thus, the vertical distance is about 1715.73m whereas the horizontal of the latitudinal distance is about 17km. this micro-region is divided into the Hill and the Plain.

Phewa Lakeside also deserves natural and cultural potentiality for eco-tourism. The residents of Phewa Lakeside also play an important role in promoting eco-tourism (Lamichhane, 2000). Phewa lake with an island temple dedicated Goddess Barahi in the middle and with its serene water reflecting the Annapurna range, legendary and second largest lake of the kingdom is playing vital role as the source of attraction for the visiting tourists by providing fishing and boating. The next attraction of the Phewa lakeside Pokhara is cultural attraction.

The Gurung culture, Thakali culture and other folk cultural shows are attractive. In these days most of the Gurung and Thakali wear their traditional dresses and they are promoting their own traditional dresses. And other ethnic groups reside in Pokhara, Phewa lakeside are also following the way of Gurungs and Thakalis because of which the cultures of the different ethnic, caste groups are preserved (Wagle, 2005).

CHAPTER- III

RESEARCH METHODOLOGY

3.1 Rationale of the Selection of Study Area

During past five to six decades, tourism activities and tourism promotional activities have been emphasizing quantitative increased of tourists in Nepal. This has greatly increased the number of tourists of different nations. Though the tourists and tourism activities are increasing, it seems very unsustainable and detrimental to the surrounding environment in the area under the study. The study area is Phewa Lakeside of Kaski district. This particular area is chosen for the study because it is easily accessible and falls as a heterogeneous geographical structure.

3.2 Research Design

For the fulfillment of the study non-probability sampling as well as probability sampling methods was adopted. Specifically quota sampling was used under the non-probability sampling and simple random sampling under the probability sampling.

Structured questionnaire was used to collect the quantitative as well as qualitative information. Limited number of respondents was interviewed, taken on group discussion and field observation was done for the primary data collection and other required information. The analysis of the study is exploratory as well as descriptive in nature.

3.3 Nature and Sources of Data:

Both qualitative as well as quantitative nature of data is used in this study. This study is based on primary data through field survey. These primary data were collected by direct interview, structured questionnaire, observation and group discussion method. Similarly, the secondary data were also used for the study, which were collected from published or unpublished written documents from individuals, experts and organization related to tourism.

3.4 Universe and Sampling

The universe of the study is the tourism activists of Phewa Lakeside Pokhara. Out of the 370 tourism activists 55 about 15% activists were sampled with random sampling for the survey.

3.5 Data Collection Tools and Techniques

To generate the primary data, the structured questionnaire, semi or unstructured interviews and field observation as well as focus group discussion were applied.

Observation, questionnaire and interview were primary data collection technique. The data were collected from respondents of the sampled unit. The sampled units were those who were selected by sampling. The necessary secondary (historical) data were collected from the VDC profile, district, regional and national level magazine, journal and books etc.

3.5.1 Primary Data Collection

Questionnaire

A long list of questionnaire that covered almost all aspects of the objectives of the study was prepared and distributed to the tourism activists for filling them up. The sampled tourism activists covered ten percent of the total number of them. The sample was selected on quota and simple random sampling basis. Structured questionnaire was used.

Interview

Different people from different walk of life were selected and asked a number of questions regarding the ecology, environment, eco-tourism in Phewa Lakeside and its potentiality in the future as well as the people's perception about eco-tourism. Some foreign tourists were also interviewed.

Observation

The Phewa Lakeside was visited and observed mainly focused on the vegetation, purity of lake water, deposition, waste disposal and run-off of the Harpan Khola.

Group Discussion

Concerned individuals and people were gathered at the side of Phewa Lake. The people especially from Gurung and Thakali ethnic groups were asked about the eco-tourism, its potentiality and scope. Former chairperson of Hotel Association Pokhara and other hotel/lodge owners were also asked for more information about study area regarding eco-tourism and its potentiality in the area.

3.5.2 Secondary Data Collection

Secondary data was obtained through various Journals, survey reports, related newspapers, dissertations, articles and previous published and unpublished researches. The data was collected from the local people as well as persons related with tourism of that area.

Literature review as extensively done for this purpose. Various libraries in Kathmandu and Pokhara were visited. This included Tribhuvan University Central Library, NTB Library, IUCN Library, Prithvi Narayan Campus Library, Institute of Forestry library, ACAP Library etc.

3.6 Data Analysis

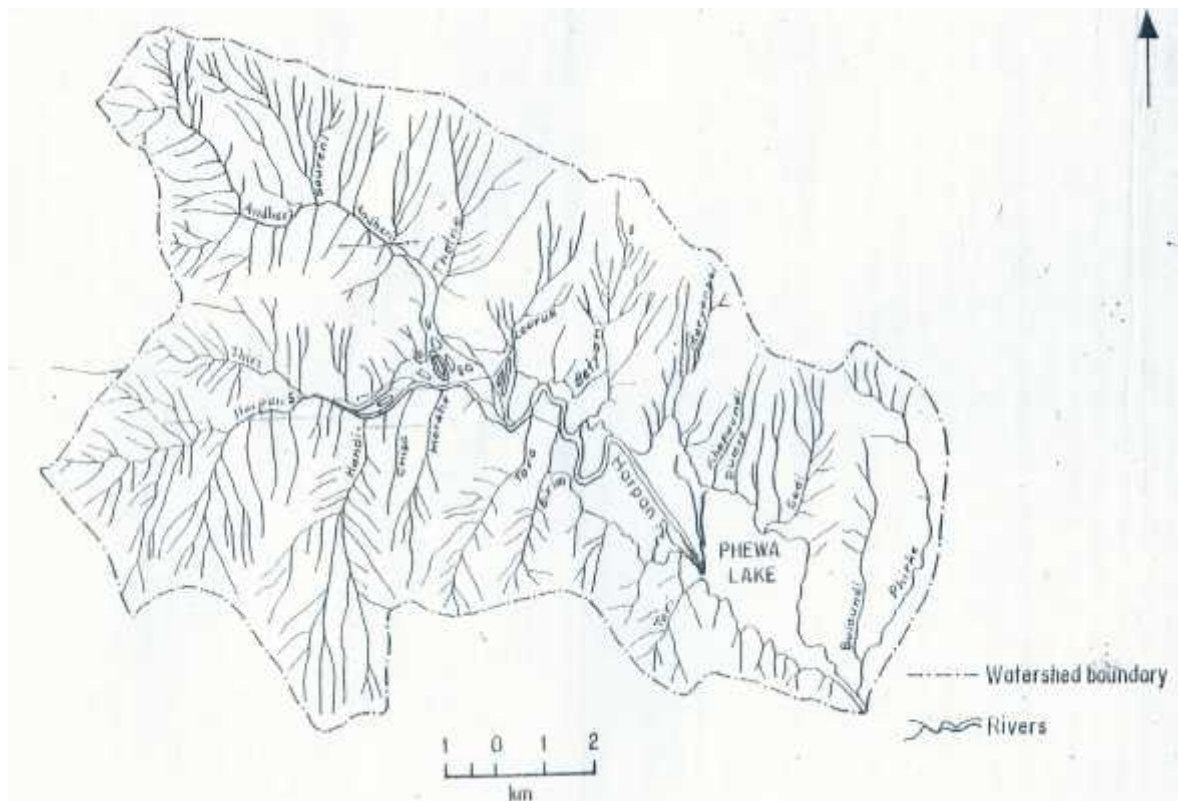
The data obtained from the field survey were coded and categorized according to the requirement. Then the coded data were converted into tables with numbers, averages and percentages through computer programs; MS-Word, MS-Excel, simple statistical tools i.e. Correlation Test was used to analyze those data. Bar diagrams were used for visible analysis of the statistics. Important information was tabulated in the table. Likert Scale is used to measure the attitude and level of satisfaction of respondents. In the case of qualitative information, these were analyzed descriptively.

CHAPTER-IV

SETTING OF THE STUDY AREA

Phewa Lake, the touristically most important lake of Nepal is a stream fed dam regulated, semi- natural freshwater subtropical mountain lake (maximum depth 24m and mean depth 7.5 m), lying at an altitude of 742m in Pokhara valley ($28^{\circ} 7' - 28^{\circ} 12' \text{N} - 84^{\circ} 7' - 84^{\circ} 19' \text{E}$). It occupies an area of 5.23 km², watershed area of 110km² (Lamichhane, 1996). The lake has multiple uses such as hydroelectricity, irrigation, fishery and a boating facility. By land use pattern the lake features contrast in terms of forested with sparse rural settlement on southern side, agricultural land with dense urban areas on northern side, silt trap zone in western side and river channel zone in eastern side of the lakeshore.

Figure 4.1: Phewa Lake and its Watershed Area



Source: Lamichhane, D.B. (2000). Phewa Lake Watershed Area: Studies on Settlements and Environmental Appraisal

4.1 Geographic and Climatic Characteristics

4.1.1 Climate and Hydrology

Phewa Lakeside climate possess humid subtropical monsoon to cool temperature monsoon climate. Mean average temperature varies between 12⁰c in the winter to 30⁰c in the summer and mean of minimum vary from 5.5⁰c in winter to mean of maximum 33⁰c in summer. Rainfall pattern is monsoon type and more than 80% of the total rainfall occurs during the period of May to September. Rainfall in Pokhara is the highest recorded in Lumle, which lies Northwest broader of the Phewa Lake. Pokhara valley gets on an average annual rainfall of 3497.4mm. Pokhara is also known as the Cherrapunji of Nepal (Lamsal, 1997). The lake water contains mostly Calcium (66.3%) and largely Bi-carbonate.

4.1.2 Temperature

Pokhara lies at an average height of 827m; it attains the temperature from 29.7⁰c to 30.3⁰c maximum in the months from April to June. Likewise, minimum temperature 15⁰c in the months January and February. Lumle, which is an exclusive area of Phewa Lakeside, is boarded with it in the north-western section from where temperatures have been recorded and used for the discovery of climatic characteristics and types in the higher altitudes of the study area.

4.1.3 Precipitation

The area of highest rainfall comes almost within the Phewa Lakeside realm where the winter precipitation occurs even in the form of snow mainly Thaple and Panchase peaks and the bordering Lumle peak, the highest rainfall zone of Nepal. Besides the north-western hill like kaski and the south-western portion of the Kalabang ridge also get the snowfall if the winter is so cold.

July is the wettest month whereas the driest months are November and December. In July Pokhara gets the average rainfall of 966mm and November and December average 21mm rainfall.

4.1.4 Wind

Mountains and hills surround the Pokhara valley. The high mountains, which are responsible to block the south-west monsoon wind in summer, have affected the wind circulation greatly from the north of the valley. The valley as well as the Phewa Lakeside area is influenced by the water-lies in winter which create anti-cyclones. On an average, Pokhara feels the north-west direction of wind moreover, south-west, north-east and south-west winds also blow in the valley. Besides, local winds also blow as the mountain and the valley breezes in several parts of the study area.

4.1.5 Soil and Vegetation

Soils and their formation in the Phewa Lakeside as well as in Pokhara have had a great influence of climates and geologic structures since the ancient periods, which ultimately have made soils and rocks in Pokhara as the crucial factors of environment because they have become mischievous for the development of the urban settlement due to many invisible voids underneath the surface.

The main soils of Pokhara are dry and moist grey, dry/dark grayish and yellow, moist brown and black, dry yellowish brown moist dark reddish and dry as well as moist brown. Moreover, the Phewa Lakeside realm consists of acidic, moderately fine-textured and non-sandy clay. Colluvial deposits can exceed 15m in depth owing to the mass movement near Pame. Soils with the loamy skeletal texture are found in the hilly areas whereas the alluvial Phewa valley floor consists of the soils from the fragmental sandy to loamy and boulder. Thus, in this realm the soils that are rich in sand silt and clay are bright reddish dark reddish brown and dark brown in different parts.

The Phewa Lakeside area has a great vegetation of altitudes from 793m to 2508.81m. Therefore, numerous plant species have flourished long since. The major plant species like *Shorea robusta* is observed mainly in the southern hills. The city rarely possesses such vegetation. The other species in the northern and western hills outside the city limit as well as within the city are *Schima wallichii*, *castanopsis indica*, *Alnus nepalensis*, *Woodfordia fruticosa*, *Pinus roxburghii*, *Dendrocalamus hamiltonii*, *Cinnamomum zeylanicum*, *Dalbergia latiflora*, *Artemisia Vulgaris* etc. the vegetation up to the altitude of 2508.81m in the Phewa Lakeside area is slightly different from the vegetation species of Pokhara. At the lower altitude *Shorea robusta* is also available. However, as the altitude increases, the variation of vegetation begins to appear. For example, at the lower elevation of around 900m *Shorea robusta* is accompanied with *castanopsis indica*, *Schima wallichii*, *Salmalia malabarica*, *Berberis asiatica* etc.

Up to the altitude of 1500m *Castanopsis indica* and *Schima Wallichii* forests are predominant. Moreover, the other species are *pinus roxburghii*, *Dendrocalamus hamiltonii*, *Artemisia Vulgaris*, *Arundinaria falcate* etc. Likewise, from the altitude of 1500m to 2508.81m, the species like *Pterocarpus santalinus* and *Rhododendron arboretum* are also observed (Lamichhane, 2000).

4.1.6 Land-use

The land-use system of the study area is rural oriented in the Sarangkot, Chapakot and Pumdi-Bhumdi VDCs and urban oriented in the Pokhara plain. The study area has been populous because of the malaria eradication program of 1956. Since then, the plain areas of Pokhara have over taken the hilly watershed of Phewa Lake for the use of lands together with the density of population. The land is divided into forests, shrubs, land-use for the agricultural production, pastures and human settlements. Phewa Lakeside itself covers the total area of 110 km².

4.2 Flora and Fauna

Pokhara is not just a place for the mountains; it is rich for its natural vegetation and forest type too. Hills like Sarangkot, Kaudanda etc boast wide variety of forest plants and trees. These dense forests are also a dwelling place for different wild creatures.

There is exclusively great floral and faunal diversity in Pokhara valley due to the prevalence of a wide range of climatic and topographical variations. The valley is dominated by rich pockets of Schima-Castanopsis forest. In the southern part of the valley Shorea robust mixed with Schema wallichii is found. Along the river and streams side, Acacia catechu at lower belt and Almus nepalensis at higher belt occur. Gregarious Bompax ceiba trees spread over flat terraces. At higher elevations, north of Pokhara, floral composition of astonishing diversity comprising several species of blossoming rhododendrons and orchids and a wide range of other species of quercus, Champ, conifers, bamboos and pasture grasses have created dense and diverse vegetation complexes.

4.2.1 Forests

a. Evergreen Coniferous Forests

The main tree species of this forest are:

Table 4.1 : Main tree Species of Evergreen Coniferous Forest

S.No.	English Name	Scientific Name	Family
1.	Chirpine	Pinus roxburghii	Pinaceae
2.	Spruce	Picea smithiana	Pinaceae
3.	Silver Oak	Gravillea robusta	Protaceae

Source: www.pokharatourism.com, 2008

b. Mixed Forests

The main trees species of this forest are:

Table 4.2: Main Tree Species of Mixed Forest

S.No.	Local Name	Scientific Name	Family
	Chilaune	Schima wallichii	Theaceae
2.	Katus	Castanopsis indica	Fagaceae
3.	Uttis	Alnus nepalensis	Betulaceae

Source: www.pokharatourism.com, 2008

c. Monsoon Forests

The main tree species are:

Table 4.3 : Main Tree Species of Monsoon Forest

S. No.	Local Name	Scientific Name	Family	Habit
1.	Sal	Shorea robusta	Dipterocarpaceae	Tree
2.	Simal	Bombax ceiba	Bombacaceae	Tree
3.	Chilaune	Schima wallichii	Theaceae	Tree
4.	Bar	Ficus bengalensis	Moraceae	Tree
5.	Pipal	Ficus religiosa	Moraceae	Tree
6.	Titepati	Artemesia vulgaris	Compositae	Herb
7.	Tapre	Cassia tora	Leguminoseae	Herb

Source: www.pokharatourism.com, 2008

d. Grasslands

The major grassland species are:

Table 4.4: Main Grassland Species

S. No.	Local Name	Scientific Name	Family	Habit
1.	Dudhejhar	Euphorbia hirta	Euphorbiaceae	Herb
2.	Banmara	Lantana camera	Verbenaceae	Shrub
3.	Unyu	Dryopteris species	Polypodiaceae	Herb
4.	Bhui Kaphal	Fragaria insica	Rosaceae	Herb
5.	Kuro	Bidens pilosa	Compositae	Herb
6.	Dubo	Cynodon dactylon	Graminae	Herb

Source: www.pokharatourism.com, 2008

e. Reverie Forests

Dominant species of this forest are:

Table 4.5: Dominant Species of Reverie Forest

S. No.	Local Name	Scientific Name	Family	Habit
1.	Khair	Acacia catechu	Leguminoseae	Tree
2.	Bayar	Zizyphus jujuba	Rhamasceae	Shurb
3.	Simal	Bombax ceiba	Bombaceae	Tree
4.	Kalo Siris	Albizzia lebbeck	Leguminoseae	Tree
5.	Amp	Mangifera indica	Anacardiaceae	Tree

Source: www.pokharatourism.com, 2008

Several species of medicinal plants are also recorded in the Pokhara valley. Some of them are:

Table 4.6: Several Species of Medicinal Plants in Pokhara

S. No.	Local Name	Scientific Name	Family	Habit
1.	Asuro	Adhatoda vasica	Canthaceae	Shrub
2.	Amala	Embllica officinalis	Euphorbiaceae	Tree
3.	Bel	Aegle marmelos	Rutaceae	Tree
4.	Neem	Azidarachta indica	Meliaceae	Tree
5.	Chutro	Berberis aristata	Barberidaceae	Shrub
6.	Palans	Butea monosperma	Fagaceae	Tree
7.	Dhaturo	Datura stramonium	Solanaceae	Shrub

Source: www.pokharatourism.com, 2008

Besides these plants, the valley is equally rich in aquatic plants as it is the home of many lakes. Some of these plants are considered very important as they have become endangered. Following is the list of major aquatic plants:

Table 4.7: Aquatic Plants in Pokhara Valley

Common Name	Scientific Name
Mosquito fem	Azolla carliniana
Water hyacinth	Eichornia crassips
Duckweed	Lemma spp.
Corntail	Ceratophyllum spp.
Water lettuce	Pistia stratiotes
Tape grass	Vallisneria spp.
Water weed	Egeria spp.
Pond weed	Potamogaton cenferoides
Water lily	Nymphoides aquatica
Hydrilla	Hydrilla verticillata
Water lotus	Nelumbo spp.

Source: www.pokharatourism.com, 2008

4.2.2 Mammals

Some major species are:

Table 4.8: Major Species of Mammals

S.No.	Name	Zoological Name	Family
1.	Common leopard	Panthera pardus	Felidae
2.	Jungle cat	Felis chaus	Felidae
3.	Crab-eating Mongoose	Herpestus urva	Herpestidae
4.	Masked palm civet	Paguma larvata	Viverridae
5.	Indian crested porcupine	Hystrix indica	Hystriidae
6.	Golden jackal	Canis aureus	Canidae
7.	Barking deer	Muntiacus muntjak	Cervidae
8.	Common otter	Lutra lutra	Mustelidae
9.	Asiatic lack bear	Selenarctos thbetanus	Ursidae
10.	Indian pangolin	Manis crassicaudata	Manidae
11.	Assamese monkey	Macaca assamensis	Cercopithecidae

12.	Bengal fox	<i>Vulpus bengalensis</i>	Canidae
13.	Leopard cat	<i>Felis bengalensis</i>	Felidae
14.	Clouded leopard	<i>Neofelis nebulosa</i>	Felidae
15.	Small Asian mongoose	<i>Herpestus javanicus</i>	Herpestidae
16.	Indian grey mongoose	<i>Herpestus edwardissii</i>	Herpestidae
17.	Indian hare	<i>Lepus nigricollis</i>	Leporidae
18.	Bush rat	<i>Golunda ellioti</i>	Muridae
19.	Himalayan yellow throated marten	<i>Martex flavigula</i>	Mustelidae
20.	Greater woolly Horseshoe bat	<i>Rhinolophus luctus</i>	Rhinolophidae

Source: www.pokharatourism.com, 2008

4.2.3 Birds

Following is a list of some very common birds of Pokhara.

Table 4.9: Common Bird Species of Pokhara

S.No.	Common Name	Scientific Name	Family
1.	Cattle egret	<i>Bubulcus ibis</i>	Ardidae
2.	Dark kite	<i>Milvus migrans</i>	Accipitridae
3.	Egyptian vulture	<i>Neophron percnopterus</i>	Accipitridae
4.	Black partridge	<i>Fancolinus francolinus</i>	Phasianidae
5.	Rose-ringed parakeet	<i>Psittacula krameri</i>	Psittacidae
6.	Eurasian cuckoo	<i>Cuculus canorus</i>	Cuculidae
7.	Blue throated barbet	<i>Megalaima asiatica</i>	Captionidae
8.	Blacknaped woodpecker	<i>Picus canus</i>	Picidae
9.	House swift	<i>Apus affinis</i>	Apodidae
10.	House crow	<i>Corvus splendens</i>	Corvidae
11.	Himalayan tree pie	<i>Dendrocitta formosae</i>	Corvidae
12.	Ashy drongo	<i>Dicrurus leucophaeus</i>	Dicruridae
13.	Black headed shrike	<i>Lanius schach</i>	Laniidae
14.	Whistling thrush	<i>Myiophoneus caeruleus</i>	Muscicapidae

15.	Beautiful nitava	Muscicapa sundara	Muscicapidae
16.	Black headed oriole	Oriolus chinensis	Oriolidae
17.	Golden oriole	Oriolus oriolus	Oriolidae
18.	Red vented bulbul	Pycnonotus cafer	Pycnotidae
19.	Grey tit	Parus major	Paridae
20.	Pond heron	Ardeola grayii	Ardidae

Source: www.pokharatourism.com, 2008

a. Common Bird Species in Phewa Lakeside Realm in Local Names

The following are the common bird species of Phewa Lakeside realm:

Malewa (migrated), Maina (migrated), Koili, Nyauli, Luinche, Kalij, Suga, Dhukur, Pani Dhukur, Ban Kukhura, Jureli, Giddha, Kag, Chibe, Chil, Bhanger, Phisto, Chamera, Latokoshero, Gaunthali, Dhobini, Kokale, Kuthurke, Lampuchhre, Kalo Bakullo, Kuire Bakullo, Hundrung, Dangre, Madhise Dangre, Toriganda, Lanche, Ghar hans, Pani hans, Jogi hans, Phunde hans, Raj Hans, Rato Tauke hans, Kurkure hans, Nake hans, Gudula, Hile kauwa, Parewa, Chakewa, Jalewa, Thauwa, Karyangkurung, Kingfisher, Huttityang, Batai Koter, Titra, Shyang Kukhura, Bhadrai, Haleso, Ranichari, Paunturi, Klankhu, Baj, Rato Charo, Kadkade, Dhungiphor, Koiralo, Chhichinkote, Top Chara, Matikore, Saro, Kyaki, (Field Observation, 2008).

b. Common Wild Animal Species in Phewa Lakeside Realm in Local Names

The following are the common wild animal species of Phewa Lakeside realm:

Bagh, Shyal, Mirga, Chituwa, Phyauro, Dumsi, Bandar, Lokharke, Kharayo, Nyaurimusa, Gohora, Chhuchumdro, Malsapro, Ban Dhade, Sarpa, Bhaguto, Hareau, Ajingar, Musa, Bharse, Ban Biralo, Langur, Pakhan ott, Pani ott, Chheparo (Field Observation , 2008).

c. Water Birds of Phewa Lake

Great Crested Grebe, Little Grebe, Darter, Great Cormorant, Little Cormorant, Cattle Egret, Great Egret, Indian Pond Heron, Intermediate Egret, Little Egret, Baer's Pochard, Bar-headed Goose, Comb Duck, Common Goldeneye, Common Pochard, Common Shelduck, Common Teal, Cotton Pygmy-goose, Eurasian Wigeon, Falcated Duck, Ferruginous Pochard, Gadwall, Garganey, Mallard, Northern Pintail, Northern Shoveler, Red-crested Pochard, Ruddy Shelduck, Tufted Duck, Lesser Whistling-duck, Common Coot, Common Moorhen, Purple Swamphen, Bronze-winged Jacana, Little Ringed Plover, Red-wattled Lapwing, Common Kingfisher, White-throated Kingfisher, White Wagtail, White-browed wagtail, Greater Painted Snipe, Common Sandpiper, Marsh Sandpiper(www.phewalake.org.np).

4.2.4 Fish Diversity of Phewa Lake

Hypophthalmichthys molitrix, *Aristichthys nobilis*, *Ctenopharyngodon idella*, *Cyprinus carpio*, *Cirrhina mrigala*, *Catla catla*, *Labeo rohita*, *Tor putitora*, *Acrpsocheilus hecagnalepiss*, *Changunius chagunio*, *Puntius Sarana*, *Puntius ticto*, *Mastacembelus armatus*, *Puntius titus*, *Barillius barna*, *Anguila*, *Lebio rewa*, *Barillius bendalasis*, *Puntius sophore*, *Puntius conchoniis* (www.phewalake.org.np).

4.3 People, Culture and Traditions

Pokhara valley is the place of both Aryans and Mongolians. Most of the settlers that came from south and west were Aryans and the rest of them who came from the north were of Mongolian origin. Before the arrival of Aryans the Pokhara valley had no human habitation. Aryans, migrated from India, were skillful cultivators. So, the fertile places of Pokhara like Hyangja, Kundahar and Bindyabasini were occupied by them and brought under cultivation. However, they preferred to live in the hills for climatic reasons. They used to send the weaker section of their society like Damai, Kami and Sarki to look after their fields. So, it is believed that the low caste people were the first inhabitants of the flat plains of Pokhara. The Muslim community also claims that they were the first settlers of Pokhara.

In the 17th century, Pokhara was ruled as a part of Kaskikot, one of the most powerful of Chaubise Kingdoms in central Nepal. Before the rise of the Shah Kings there are no reliable historical accounts.

4.3.1 People of Pokhara and Phewa Lakeside

Pokhara is rich in cultural diversity. The population of the valley comprises Brahmins, Kshetris, Newars, Gurung, Magar, Thakalis and other occupational castes like Damai (tailor), Kami (blacksmith), Sunar (goldsmith) and Poda (sweeper). There is a small Muslim community as well.

4.3.2 Occupation

The traditional community of Pokhara comprises mainly peasants. The traditional occupation and role of different castes and communities remain more or less the same. In the military profession most of the recruits are from Gurung, Magar and Kshetri. Gurung and Magar prefer the Indian and British Gorkha army. Thakali and Newar are traditional business community. Thakalis prefer hotel business whereas Newars are involved in various commercial activities. Muslims of Pokhara are also involved in business. Most of the people of Pokhara valley are Hindus and Buddhists. However, different castes and ethnic groups have their own culture and tradition. There are nearly 20 castes and communities in the Valley. Phewa lakeside is also the blend of these communities.

a. Brahmin and Kshetri Community

These are dominant communities elsewhere in Nepal. They are strict followers of Hinduism. The general cultural and traditional practices in Nepal reflect that of Brahmin and Kshetri communities.

b. Gurung Community

Gurungs are hard working mongolian hill people inhabiting southern part of Annapurna region in between 5,000 to 7,000 feet. Their main villages around Pokhara include Ghandruk,

Dhampus, Ghachok, Armala, Tanting, Chhomorng and Sikles. But frequently they are living all around the Pohara valley. Gurung people are considered honest, brave and laborious. Most of the Gurungs prefer to join the British and Indian army. They have their own language and their cultural practices still exist. The Gurungs live in small round, oval or rectangular houses which are clustered to form a single village. The upper section of their house is white washed and the lower part is red plastered. The traditional costume for the women is maroon velvet blouse and large cloth which is fastened over their one shoulder, a wrap-round skirt and many yards of narrower cloth wrapped around their waist (Photo, Annex-3). Their ornaments include gold and coral necklaces which represent the prosperity of their family. Gold ear and nose rings are given to woman at the time of marriage. Money, keys and various useful things are wrapped into the waist cloth. A cotton cloth is usually tied round the head. Males wear a short tied across the front and a short skirt of several yards of white cotton material wrapped around the waist and held by a broad belt. Gurungs are broadly classified into two groups, viz. four clans and sixteen clans. Four clans are considered superior to the sixteen clans.

In Gurung community, boys and girls are free to make self choice of marriage partners. However, traditionally, cross-cousin marriage both of paternal and maternal lineage is widely practiced. The Gurungs have a very interesting dance tradition. Two dances namely Ghatu and Shorathi are most popular. Rodi is another interesting Gurung institution. This is a club for boys and girls, of more or less of the same age-usually ten or eleven, under the supervision of an adult. Rodi also serves as a work association where various activities are planned for co-operative working. The most important festival of Gurung is Lhosar which is observed in the end of December.

Both cremation and burial practice of disposing dead bodies are prevalent in Gurung communities. Sometimes in the memory of dead person resting places (Chautara) are constructed.

c. Thakali Community

Thakalis are the original inhabitant of Thak Khola, a high valley of Kali Gandaki in Mustang district northeast of Pokhara. The traditional areas of the true Thakali is known as Thak-Satsaya or seven hundred Thak but nowadays they have increased in number and have spread much further. Thakalis have regular feature of Mongolian with round face, flat nose, high cheekbones, narrow eyes and yellow skin pigments (Photo, Annex-3). They speak their own language which belongs to the Tibeto-Burmese family. Previously the profession of the Thakali was salt trade from Tibet. But nowadays they are involved in different business in the major cities of Nepal and have proved themselves to be successful entrepreneurs.

Thakali marriage custom is distinctive. They practice cross-cousin marriage of both maternal and parental lineage. The traditional marriage system is very interesting. The friends and close relatives of the boy set out for evening walk and capture the girl to be married. Then she is kept under the strict guardianship until her parents agree. But their traditions are rapidly changing and many Thakalis do not prefer traditional marriages.

The most significant festival is "Ihafeva" which is observed in November of every monkey year of the twelve year cycle according the Tibetan calendar. Many Thak people are attracted By Pokhara but Thak Khola is still considered the homeland of Thakalis. There are fewer Thakalis in Pokhara in comparison to others but their influence in trade and business is high.

d. Newar Community

Newars are the indigenous habitants of Kathmandu Valley. They have come to Pokhara for their traditional business and their main concentration is in Ramkrishna Tole and in the area around Mahendra Pool. One can observe their community in Ramkrishna Tole properly. They still follow the joint family system and every member is involved in the family business. They have their own language and very rich tradition. Their caste group ranges from lowest group of sweepers to the highest group of priests. They follow Buddhism as well as Hinduism.

e. Magar Community

Magar communities are migrated one and found elsewhere in scattered form they have their own language, customs and cultural identity.

f. Muslim Community

This community is regarded as one of the oldest community residing the valley. They are very conservative and are strict followers of Muslim laws. They are very few in number and their main business is selling bangles. They are mainly concentrated at Kundahar.

g. Gaine Community

One can see persons begging on roads by singing in accompaniment with a typical musical instrument. These people represent the Gaine community. They are concentrated in the Batulechaur which lies on the northern part of the valley. They are very poor and play the same role in social life as "minstrels". The instruments they carry along with them are known as "Sarangi" which is a locally made violin. They sing songs of valor, gallantry or of some tragic incident (www.pokharatourism.com, 2008).

4.4 Infrastructures

4.4.1 Transportation

In Pokhara transportation facilities were nil up to 1952. Since then it has obtained the airways facilities to connect with Kathmandu. Bullock carts and jeep facilities were primitively provided only in 1962. Nowadays, Pokhara Sub-metropolitan city is facilitated with the following transport system.

a. Road Transport

Opening of the Siddhartha highway in 1969 and the Prithvi Highway in 1970s has thrown the light in the development of the transport network of the city. In the present, the Pokhara-

Baglung Highway also connects Pokhara with Baglung in the Western hilly region of Nepal. Similarly, some feeder metalled as well as unmetalled roads have been constructed to connect the peripheral rural hills of the city.

Many Branch roads connect the main roads of the city. Most of them are metalled and some of them are still unmetalled. These roads in the city are used for the means of transportation like the city buses, taxis etc. Moreover, jeeps, cars motorbikes and bicycles are also used as the means of transportation whereas there is the complete absence of auto-rickshaws, rickshaws and tangas in the city.

b. Airways

Pokhara, one of the important cities of Nepal, was isolated up to 1952 because there was not even a single connection of the airway. The first arrival of the plane at Pokhara was in 1952 from Kathmandu. At present, the grass runway has been converted into the concrete one. Kathmandu, Jomsom, Bhairahawa, Bharatpur etc are connected with Pokhara by airlines. Many planes of the NAC, the NECoN Air, the Nepal Airways, the Everest Air, Lumbini Air etc fly from Pokhara to several places of Nepal.

c. Waterways

Pokhara has a little facility of the water transport not from the river but from Phewa Lake. Before the construction of the Baidam-Pame motorable road; boats were used for the transport of goods, even at present some people use the boats for this purpose. On the whole, the lake is being used for the entertainment of the tourists together with the local transport of goods and people.

4.4.2 Communication

In the hilly sector of the Phewa Lake watershed, some post offices, telephones, mobile services are provided. Likewise, the communication of Nepal Television is relayed from the peak of Sarangkot. In Pokhara the wireless telephone, telegraph, postal services, fax, e-mail, internet, etc facilities are in practice.

4.4.3 Electrification

The urban area of study area is benefited with the electricity facility. The area is covered with the central electrification network. Before covering the central network, micro-hydropower plants were used. Rural parts of the study area Pumdi-Bhumdi and Chapakot VDCs are equally benefited equally but these areas contain very few industries run by electricity. Sarangkot VDC is not fully covered with the electricity facility.

4.4.4 Health Services

Urban area of Pokhara sub-metropolitan city has the advance health services such as regional hospital, medicals, nursing homes private hospitals etc. But in rural areas health posts and sub-health posts are established as government mechanisms. Moreover, the area contains medicals and general health care services centers as private. Pokhara sub-metropolitan city stands as a main health service center of the area where Gandaki hospital and Manipal stand as main health service centers.

4.4.5 Education

The main education center of the rural areas/VDCs of Phewa Lakeside is Pokhara sub-metropolitan city, where government and private both schools and colleges are established. In rural parts of the study area such as Sarangkot, Chapakot and Pumdi-Bhumdi VDCs contain the government schools and few private schools which are less qualitative than the Pokhara city. Therefore, Pokhara sub-metropolitan city is the main education center of the study area where Prithvi Narayan Campus, Engineering, Forestry campuses stand as main education centers.

4.5 Emerging Environmental Problems in Phewa Lake

4.5.1 Noise and Air Pollution

Noise pollution has increased on the southwestern side of the dam, especially from Barahi chowk to Baidam and up to Khahare, due to the narrow congested roads used by many old

and poorly maintained vehicles with uncontrolled speed. Noise pollution is also caused by hotels and restaurants that play loud music, blowing horns of vehicles and noise from power tillers and tractors transporting consumer good. Local people say that the mismanagement of roads is a contributing factor to the increase in both noise and dust pollution. Noise and air pollution have also increased due to the lack of emissions regulations for vehicles traveling between the Phewa, Lakeside and Pokhara Municipality. The amount of dust particles and carbon emitted can easily be seen on buildings and tree leaves adjacent to the roads.

4.5.2 Unsightliness and Visual Pollution

The visual beauty of the lake has been adversely affected by sign boards erected chaotically near the lake and illegal construction of houses and huts which obstruct the lake view. The lake's beauty is also diminished by the use of the view deck and other lake areas to wash and dry clothes. Around Barahi temple dirt accumulates as a result of the carelessness of devotees after they complete their worship and sacrificial offerings.

4.5.3 Solid Waste Pollution

Solid waste is disposed in and around the lake due to the lack of proper management. The sight of waste dumps at several places spoils the pleasant view to the lake. In addition, these waste dumps are breeding grounds for flies and mosquitoes and contribute to the spread of disease. Efforts to prevent noise, air and solid waste pollution in areas around the lake have proven fruitless until now. The municipality has attempted to make a landfill site for the management of solid waste disposal and a drainage system is being planned that will carry waste from urban areas to Phirke Khola and into the lake. However, despite these attempts, the problem still remains and efforts should be made to reduce the solid waste problems in the lakeside area.

4.5.4 Lake Eutrophication and Siltation

Eutrophication has increased in many areas around Phewa Lake, including those where the population is dense, agricultural activities are common, where rain floods carried down by

rivers and streams dissolve into the lake and where washing is done and filthy liquid waste from hotels and residences flows directly into the lake and fish farming areas. These activities cause higher nutrient concentrations which lead to eutrophication in such places. A few lakeside areas have already been adversely affected by pollution from the decomposition and decay of lake vegetation. These areas include the junction of Phirke Khola, the site of the tourism office, Baidam, Khahare, Gaira Chautara, the Lakeside area which is being used for cultivation from Khahare to Pame road and east of the lake. In the same way, eutrophication is increasing at the confluences of Harpan Khola and other small rivulets. Public grievances claim that the excessive nutrient flow in some areas (Phirke, the area between Khahare and Gaira Chautara and other such parts), has caused algae (bloom that leads to the death of fish by reducing oxygen availability). These areas are very sensitive from a conservation standpoint, and efforts should be made to reduce the amount of nutrients present.

Soil erosion and siltation are significant problems in the Phewa watershed. Both natural processes and man-made activities contribute to these problems. Siltation rates have increased so much that the life span of the lake has decreased. At the present rates of siltation, it is estimated that the lake will be completely filled in 100 to 175 years. Thus, construction activities and agriculture need to be carefully monitored and regulated to prevent excessive soil erosion and further siltation.

4.5.5 Wildlife, Their Habitats and Biodiversity

According to local people and local agencies, wild animals, their habitats and breeding grounds in the natural forest areas adjacent to the lake have been adversely affected by increasing urbanization, and currently unregulated tourism. The District Forest Office has strictly conserved the Raniban area lying adjacent to the Phewa lake dam and some wildlife habitats are found there. However, in both the upper parts and southwest areas of the lake, hotel and monastery construction as well as tourism, are increasing, and land is also cultivated, these activities have led to the decrease of habitats and breeding grounds for water fowl, amphibians, reptiles and wild animals in that area. Also, because of agricultural activities south of Raniban, Tarikhet, Lamodanda, Chapakot and other sites, the wildlife corridor is slowly vanishing. Increased boat traffic has also accelerated the problem. The

absence of a code of conduct for safari and other types of tourists result in flower and plants being collected at will, decreasing biodiversity.

4.5.6 Eichhornia Crassipes/Jalkumvi

Eichhornia Crassipes is commonly known as water hyacinth and locally called 'Jaluki', 'Jalkumvi', 'Nilkamal' etc. in different parts of Nepal. This is rhizomatous, floating perennial aquatic macrophyte. Root system is feathery and bushy type. Leaves are rosettes with ovate to sub orbicular blades. Leaf tip is sub acute to round. Petiole is spongy inflated at base that helps in buoyancy. Spike is 6-20 flowered, large and showy. Peduncle is hidden by two sheathing membranous spates; lower spat bears leaf like blade. Petals are violet colored; upper most one contains yellow spot near the base and blue patch at the center.

This is the most notorious aquatic weed, which causes serious and extensive problem. This is due to the rapid growth rate of the plant with vegetative as well as sexual reproduction, competitive ability and movements of plants and plant mats by wind, and water current and viable seeds. This weed is an alien species for Nepal. Today it occurs mostly in Terai, inner Terai and sub-tropical valleys like in Butwal and Bhairahawa, Janakpur, Koshi, Kathmandu, Pokhara, Siraha and other parts of Terai. Phewa Lake is one of the most interested areas in Pokhara. This is also found in rice field (Rai, 1993).

a. E. Crassipes; Problem, Use and Control

Because of human activities and their bi-products new species and population of weeds, pests, insects and diseases appear where they could not or did not exist before. The aquatic environment is complex and the mode of introduction of Eichhornia Crassipes still unknown in Phewa Lake. As eutrophication of lakes and rivers proceeds, populations of E. Crassipes growing their explode. This weed rapidly colonizes and spreads during rainy season to form dense mat that interferes boating, agriculture yield decreases as E. Crassipes remains growing in the rice field. E. Crassipes causes number of other problems as follows:

i. Water Chemistry

E. Crassipes extracts nutrients from marshy land to add into the lake if the weed is not removed periodically. Dissolved Oxygen (DO) of water under dense mat of E. Crassipes may decrease up to zero (ICIMOD, 1998).

ii. Evapo-transpiration

The evapo-transpiration through a cover of E. Crassipes is always greater than the evaporation from the open water (ICIMOD, 1998).

iii. Siltation, Flooding and Navigation

Mats of E. Crassipes can become very extensive on the reservoir and wetland. This weed blocks the water flow and decreases rate of water flow that will result flood later on. This also reduces the water into shallow marshes (ICIMOD, 1998).

iv. Phytoplankton

Phytoplankton requires light intensity for growth but shading by E. Crassipes mat can depress the growth of phytoplankton that in turn depress the zooplankton density and causes severe effects on food-chain of aquatic ecosystem (ICIMOD, 1998).

v. Flora and Fauna

The weed interacts with indigenous flora to reduce by shading and competition for the resources. Submerged and smaller plants may receive insufficient light for photosynthesis. The prolonged competition by dense growth of E. Crassipes causes the reduction of the floral diversity of the aquatic ecosystem. Dense mat of E. Crassipes affects the aquatic fauna directly by reducing DO of water, breeding sites and indirectly altering food chain by reduction in phytoplankton, zooplankton and small plants population. Certain unwanted pests and parasites are favored (ICIMOD, 1998).

vi. Aquaculture and Human Food

Fish is one of the remarkable human food and an important item for trade. Reduction of DO under the E. Crassipes mat may cause high mortality to fish population. In Nigeria 500km² of the coastal lagoons were infested by E. Crassipes. About 24000 fishermen were adversely affected and this figure rose to two millions. In small scale E. Crassipes causes damage on cage culture in the lake (ICIMOD, 1998).

vii. Public Health and Life Style

Life style of people living near the water resources is significantly marked by the condition of the water body because it may be the source of water of household use and fishing is the main economic supports. The heavy infestation of E. Crassipes has adverse effects on public health and life style. The dense mat of E. Crassipes provides shelter for different parasites; vector of malaria, schistosomiasis, filariasis and encephalitis and other human and animal disease increase causing deterioration in human health and loss of livestock. Harley (1994) reported that the Cholera organism concentrates around the roots of E. Crassipes (ICIMOD, 1998).

b. Use of Eichhornia Crassipes

The use of Eichhornia Crassipes in following purposes will be the best way for control:

i. Food and Fodder

This weed can be used as cattle feed, E. Crassipes may also be used as food for fish, duck and pig. It can be used as green food in poultry (ICIMOD, 1998).

ii. Fertilizer

E. Crassipes can be used as fertilizer either by burning or as compost. The ash of this weed is rich in potash and compost is rich in Nitrogen, Phosphorus, Potash and other nutrients. This is the best way of the weed control (ICIMOD, 1998).

iii. Biogas

E. Crassipes could produce double amount of biogas than equal amount of cow dung. In addition, the pollution of heavy metals such as Nickel and Cadmium increase the biogas production capacity of E. Crassipes (ICIMOD, 1998).

iv. Water Purification

E. Crassipes is a good pollution removing agent to extract different kinds of pollutants such as calcium, Hallogens, Heavy metals Nitrogen, Phosphorus, Potash and organic matters and others (ICIMOD, 1998).

c. Control of E. Crassipes

E. Crassipes can be controlled applying following control measures:

i. Herbicides

The control of this weed using herbicides has been successful in case of small infestation and accessibility by land and boat (ICIMOD, 1998).

ii. Mechanical Harvesting

This is environmentally safe and more beneficial. Complete eradication of E. Crassipes is impossible by this method because of minute long-live seed (ICIMOD, 1998).

iii. Bio-Control

The control of E. Crassipes using biological control agents was applied in twenty countries. This method is preferred in Phewa lake under the supervision of experts (ICIMOD, 1998).

4.5.7 Drainage

Harpan River is the main river from the Phewa Lake catchment area. It has two main streams fed tributaries, Andheri and Sidhane. Harpan River meanders about 5 km till it reaches the mouth of lake. Andheri, Chaharapari, Bhalu, Baje and Thotne confluence to form Khahare that joins harpan at Thulakhet. Whereas Sidhane joins with Krelo, Pandhera, Naule, Sadi,

Tuje and Mahabir to form Harpan river. Kandi also joins Harpan at Ghatichhina. Other tributaries flowing into the Harpan system along the lacustrine plain are the north flowing rivers Birim and Machha Pokhari and the south flowing Lauruk, BEtyani, Buhetro and Khahare.

Other independent rivers flowing into the Phewa Lake are the south flowing Khanjare Orlan, Balaudi and Phirke; and the north flowing Mure, Sasarko and Khahare. The Phewa Lake flows out as Pardi Khola to join the East flowing Phusre river (Ale, 2005).

4.6 Phewa Conservation Practices

Environmental degradation around and within the lake is further compounded by the ownership and demarcation of the lake. The Water Resource Act 1992 and the Forest Act 1993 have empowered the ministries with respect to ownership. The Municipality Act 1992 empowers the municipality, and the Aquatic Life Act 1961 delegates the harvest of lake products and the management of water bodies to the Ministry of Agriculture. In addition local people's claims of ownership in the lake area are not fully considered.

In the past, various government and non-government agencies have tried to solve these problems. For instance, the Pokhara Valley Town Development Committee and the Town Development Committee established standards for the development and expansion of the town. Also some private land was acquired by the government for the protection of the lake. The Phewa Watershed Management Program has made efforts to protect the watershed area and has been largely successful in establishing vegetation in upstream areas. However, while the Phewa Watershed Management Program is involved in reducing soil erosion and siltation originating from upstream, much still needs to be done in the downstream area. The immediate vicinity of the lake significantly contributes to Lake siltation and pollution because environmental standards and criteria were implemented late by the relevant agencies and the local people. In addition, potential problem has been caused by the recently constructed road to Pame further complicating the lake pollution issues (Rajbhandari & Joshi, 1998).

For the conservation and development of Phewa lake area, Government of Nepal formed the following Phewa Lake Area Conservation Committee:

- Chairperson, District Development Committee, Kaski - Chairperson
- Chief District Officer, District Administrative Office, Kaski - Member
- Mayor, Pokhara Municipality- Member
- Local Development Officer, District Development Committee Secretariat, Kaski - Member
- Director, Department of Housing & Urban Development, Western Regional Directorate Pokhara - Member
- Head, Tourist Information Center, Kaski - Member
- Head, District Forest Office, Kaski - Member
- Director, Western Regional Irrigation Directorate, Kaski - Member
- Representative, Regional Planning Office, Pokhara - Member
- Representative, Hotel Association, Pokhara Municipality - Member
- Nominee from Non-governmental Organization, Pokhara - Member
- Ward Chairperson, Concerned Ward of the Municipality - Member
- Three persons Nominated by Government of Nepal from among the persons reputed in the related field- Member

Moreover, several non-governmental organizations are involved for the conservation of Phewa Lake. For instance, Phewa Lake Environment Awareness and Capacity Building Project, Local Environment Improvement Committee, Fisheries Research Station, Machhapuchre Development Organization, Pokhara Besi Environment Improvement Committee, Phewa Youth Club etc. are the major.

CHAPTER- V

PRESENTATION AND ANALYSIS OF DATA

5.1 Structure and Analysis of Data

5.1.1 Age Structure

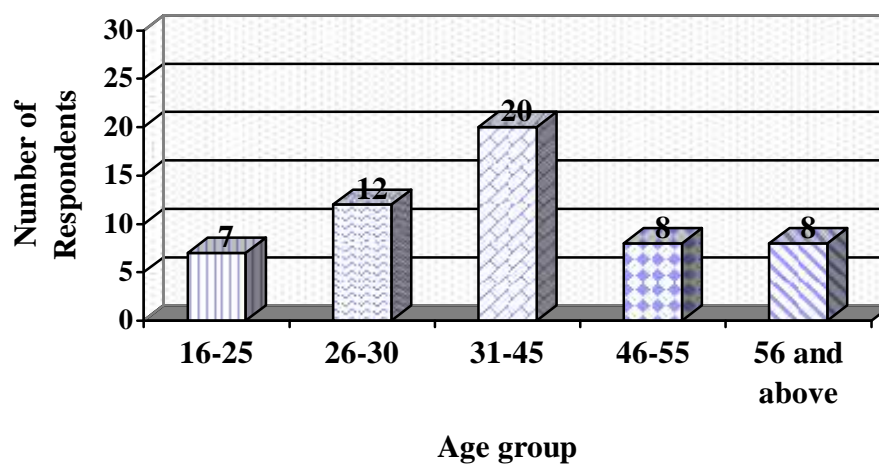
Respondents in the questionnaire survey included different groups. The diagram depicts that most of the respondents were taken from economically active age group people. Let us see the respondents' classification according to age group.

Table 5.1: Respondents Classification According to Age Group

Age Group	Number of Respondents
16- 25	7
26 - 30	12
31 - 45	20
46 - 55	8
56 and above	8
Total	55

Source: Field Survey 2008

Figure 5.1: Respondents Classification According to Age Group



Above table and figure show that the majority of respondents were taken from economically active age group 31-45 and 26-30. Age group of 16-25, 26-30, 31-45, 46-55, and 56 and above were taken 12.72, 21.81, 36.36, 14.54 and 14.54 percent respectively.

5.1.2 Caste/Ethnic Group

Caste/Ethnic composition plays a crucial role in Nepalese social structure. As there is dominant of Gurung followed by Chhetri and Brahmin, respondents were also taken accordingly. Caste/Ethnic compositions of the respondents were as follows:

Table 5.2: Caste/Ethnic Composition

Caste/Ethnic group	Respondents	
	Number	Percentage
Gurung	16	29.09
Chhetri	11	20
Brahmin	9	16.36
Thakali	6	10.90
Magar	4	7.27
Schedule caste	9	16.36
Total	55	100

Source: Field Survey, 2008

Above table shows that majority of the respondents were Gurungs (29.09%) followed by Chhetris (20%), Brahmins (16.36%), Thakali (10.90%), Magar (7.27%) and schedule caste (16.36%).

5.1.3 Education

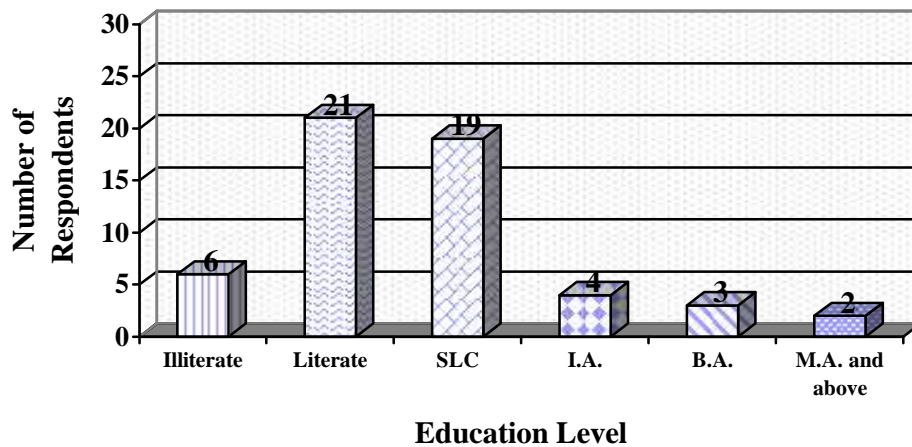
All kinds of respondents were taken into consideration for the study purpose. The following table and figure show different educational levels of the respondents.

Table 5.3: Education Levels of the Respondents

Education Level	Number of Respondents
Illiterate	6
Literate	21
S L C	19
I A	4
B A	3
M A and Above	2
Total	55

Source: Field Survey, 2008

Figure 5.2: Education Levels of the Respondents



The literacy level of the respondent was found to be 89.09%. The above table shows that the maximum population (38.18%) had the education of literacy followed by SLC (34.54%), Intermediate (7.27%), Bachelors (5.45%) and Masters and above (3.63%).

5.1.4 Occupation

The respondents were selected from different occupation groups. Occupational distribution of the respondents was as follows:

Table 5.4: Occupational Distributions of the Respondents

Primary Occupation	Respondents	
	Number	Percentage
Boatmen	15	27.27
Hotel/Lodge owners	12	21.81
Agriculture	9	16.36
Travel and Tour Operators	7	12.72
Grocery shop owners	6	10.90
Trekkers	6	10.90
Total	55	100

Source: Field Survey, 2008

The above table indicates that most of the respondents (27.27%) had boatmen as their occupation. Rest of the respondents (73%) had other occupations as the source of income. They were Hotel/Lodge owners (21.81%), Agriculture (16.36%), Travel &Tour operators (12.72%), Grocery Shop owners (10.90%) and Trekkers (10.90%).

5.1.5 Land Holding

Land holding of the respondents in the study area was found to as that given in table 5.5 below:

Table 5.5: Land Distributions by Number of Respondents

Land (in Ropani)	Respondents	
	Number	Percentage
Less than 1 Ropani	18	32.72
1-5 Ropani	17	30.90
5-10 Ropani	11	20
10-15 Ropani	6	10.90
15-20 Ropani	3	5.45
Total	55	100

Source: Field Survey, 2008

Attempts are made to assess the status of landholdings of sample households as the amount of land holding is the main indicator to assess the economic condition of any family. The table shows that most of the sample respondents (32.72%) have less than 1 ropani land and next (30.90%) have 1-5 ropani land.

5.2 Occupational Satisfaction of the Respondents

Occupational satisfaction of the respondents was found to as that given in the table 5.6 below:

Table 5.6: Satisfaction with Current Occupation

Primary Occupation	Respondents		Satisfied		Unsatisfied	
	Number	Percentage	Number	Percentage	Number	Percentage
Boatmen	15	27.27	11	20	4	7.27
Hotel/Lodge owners	12	21.81	9	16.36	3	5.45
Agriculture	9	16.36	4	7.27	5	9.09
Travel & Tour Operators	7	12.72	6	10.90	1	1.81
Grocery shop owners	6	10.90	4	7.27	2	3.63
Trekkers	6	10.90	5	9.09	1	1.81
Total	55	100	39	71	16	29

Source: Field Survey, 2008

Among those unsatisfied 16 (29% of total) respondents 8 (50%) respondents preferred to be involved in other services, 6 (37.5%) respondents preferred to be involved in business and 2 (12.5%) respondents preferred to be involve in social work.

5.3 Traditional Rites and Rituals

Naturally, different people have different cultures maintained in different places. By the time they are being amended by the effect of civilization. Such kinds of effect are seen in Lakeside. In Lakeside there are different types of traditional rites & rituals followed by local people since the past age. Such as rites and rituals followed Gurung, Thakali, Magar, Tamang could be seen but they are changing gradually because of the inflow of tourists in different rates. In this case different respondents have different views in the study area.

Table 5.7: Changing of Traditional Rites and Rituals Patterns of Local Respondents

Statement	Respondents	Percentage
Unchanged	16	29.09
Slightly	32	58.18
Totally changed	7	12.72
Total	55	100

Source: Field Survey, 2008

Above table indicates that in the context of traditional rites and rituals, 16 percent, 32 percent and 7 percent respondents from the field area are giving their views on unchanged, slightly changed and totally changed respectively. The data shows that change in traditional activities is being high only because of tourism activities from abroad.

5.4 Dressing Pattern of Respondents

In fact dressing patterns represent the fashion. Fashion indicates the people of different cultures. There are different types of dresses followed by the indigenous people (different castes) in the study area. Gurung, Tamang, Magar have their own special dress like gunyucholo, Bakhhu, Patuki, Pote, ghangar, Chura, Bala Dhago, tika, Kalli for female and Kachhad, Kattu, Bhoto, Daura, Suruwal, Jabari, Dhakatopi for males. But now we cannot see such fashion due to the effect of Western fashion by the inflow of tourists, TV, Cinema etc. Consequently, local dressing pattern has been replaced by Western fashion.

Table 5.8: Changing of Dressing Pattern in the Study Area

Statement	Respondents	Percentage
Drastic change	19	34.54
Moderate change	18	32.72
Little change	13	23.63
Unchanged	5	9.09
Total	55	100

Source: Field Survey, 2008

From the survey, it is found that percentage of people supporting drastic change is high that is 34.54 percent. Similarly, the percent of moderate change is 32.72 percent, percent of little change is 23.63 percent and unchanged is only 9.09 percent. Thus the change in dressing pattern in the study area is impressing by arrivals of tourists among others.

5.5 Housing Patterns

Twenty five years ago, there were old type of houses made by stone, mud, wood, roof with straw and grass. When tourists used to visit in this area the income patterns of the local people changed. As a result local people started making the modern type of houses, now; individuals have built modern and luxurious houses, hotel, bars, restaurants with cement, brick, rod and grass for the tourists. The local people either use the houses for individual residential purpose or service purpose. In fact there is drastic change in housing patterns, hotel, lodges contain the thatch roof (Field Observation, 2008).

5.6 Family Patterns

Joint families like other communities of Nepal were observed in Lakeside also. But now separate family system has increased due to the effect of modernization. People of study area came to know that separate family and individual family system is much better than joint family system. Every individual earns the money engaging in different jobs which is affiliated to tourism industry in Lakeside.

Table 5.9: Family Pattern

Family size	Number of Respondents	Percentage
Individual	22	40
Nuclear	27	49.09
Joint	6	10.90
Total	55	100

Source: Field Survey, 2008

Field survey shows out of 55 respondents 22, 27 and 6 respondents have individual, nuclear and joint family system respectively. Survey was designed that for individual is single person and separate is that separately staying with their child leaving their old home, father and mother, sister and brother. The separate family system in the Lakeside is more in percent because they have to leave their old home to engage in tourism industry.

5.7 Investment Patterns of Hotel/Lodge in Lakeside

There are different hotels in Lakeside. On the basis of investment hotel are divided into three standards.

Table 5.10: Investment of Sample Hotel in Lakeside

Standards of Hotel	Investment Pattern	Respondents	Percentage
Lower Standard	Below 8 Lakh	5	41.66
Middle standard	8 Lakh to 15 Lakh	4	33.33
Higher standard	Above 15 Lakh	3	25
Total		12	

Source: Field Survey, 2008

Only 12 hotel/lodge was sampled in Lakeside Pokhara. Among them only 3 (25%) hotels are considered as higher standard having investment of more than 15 Lakhs. On the other hand 41.55 percent of hotels/lodges are considered as lower standard, with investment of less than 8 Lakh. Therefore it is observed that, the higher standard hotels are less at lakeside. There are many hotels are less at lakeside. There are many hotels with lower standard due to the lack of

sufficient money to invest. On the basis of payment, the hotel are divided into two i.e. invest by own and invest through bank loan.

Table 5.11: Payment Pattern in Sample Hotel in Lakeside Pokhara

Description	Respondents/Hotel Owner	Percentage
Self Investment	9	75
Loan From Bank	3	25
Total	12	100

Source: Field Survey, 2008

The above table shows that among the sample hotel of 12, 75 percent hotels were established through their own property by hotel owners and 25 percent hotels were through loan from the bank. Thus ongoing of hotels are self financed.

5.8 Duration Length of Stay of Tourists

The length of stay depends on the availability of activities and facilities. To identify this, 12 hotel/lodge owners were asked. From the field survey it is found.

Table 5.12: Duration Length of Stay of Tourists

Length of Stay	Respondents/Hotel Owner	Percentage	Remarks
Two days	6	50	Two days means two days and three nights.
Three days	3	25	
Four days	2	16.66	
More than four days	1	8.33	
Total	12	100	

Source: Field Survey, 2008

Let us find the average length of stay of tourists,

Length of stay = x, Number of respondents = f,

Number of respondents \times Length of stay = fx

	<u>x</u>	<u>f</u>	<u>fx</u>
	2	6	12
	3	3	9
	<u>4</u>	<u>3</u>	<u>12</u>
Total	9	12	33

We have,

$$\bar{x} = \frac{fx}{f} \quad \bar{x} = \frac{33}{12} \quad \bar{x} = 2.75 \quad \text{Average length of stay}$$

From the above table and average length of stay we can say that the hotels are getting benefits of only 2.75 days, which is less than the national average length of stay of tourists. It is due to the significant number of non-residential tourists visiting in Phewa Lakeside.

5.9 Employment Generation

Tourism is human activity as well ever-growing business. It gives employment opportunities in tourist areas. Employment depends upon the size of hotels and services. From the 12 hotels following employment patterns are observed.

Table 5.13: Employment Generation of Sample Hotels

Employment Patterns	Hotel	Percentage
Less than 5 staff	3	25
5 to 10 staff	5	41.66
10 to 20 staff	3	25
Above 20 staff	1	8.33
Total	12	100

Source: Field Survey, 2008

5.10 Tourist Season

Tourism is a seasonal business. Pokhara's tourism business fully depends on season. From the survey of 12 hotel owner's experience, following result was found in different seasons. As the record of their hotel business is as follows.

Table 5.14: Tourist Seasonal Variations in the Study Area

Season	Respondents	Percentage
Winter	6	50
Autumn	3	25
Summer	2	16.66
Spring	1	8.33
Total	12	100

Source: Field Survey, 2008

Above table shows that 50 percent of hotels are getting business highly on winter season and followed by 25 percent in autumn season. Only long staying guests stay in old and renowned hotels in summer and spring seasons. Most of the domestic visitors provide chance to serve during the off-season.

5.11 Major Sources of Tourists Attractions

The study area is an appropriate site for eco-tourism. The sources of tourist attractions like scenic beauty, quiet flat lake, and temple in the middle of the lake, natural resources and cultural diversity are abundant there. With the view of obtaining the attraction sources of eco-tourism, people were asked and field observation was done. This gave following detail result based on the survey.

Table 5.15: Sources of Tourists Attractions

Tourist Attraction	Respondents	
	Number	Percentage
Pleasure environment/scenic beauty	4	7.27
Cleanness/sanitation of the place	6	10.90
Natural resources	7	12.72
Cultural diversity/cultural attractions	2	3.63
Pleasure environment & natural resources	6	10.90
Pleasure environment and people's initiation	2	3.63
Pleasure environment & cultural diversity	4	7.27
Above all	24	43.63
Total	55	100

Source: Field Survey, 2008

Above table indicates that out of 55 respondents, 24 (43.63%) considered the great importance of all components to attract the tourists. It can be inferred from the above information that all the things are equally essential to attract the tourists.

5.12 An Assessment of Basic Elements of Tourism in Lakeside

The study area is the central focus of tourism in Pokhara. It contains several attractions. With the view of obtaining the condition of basic elements of tourism in Lakeside, respondents were asked and field observation was done. This gave the following detail result based on the survey.

Likert Scale is used to find out the attitude and level of satisfaction of respondents.

For example: Statements intended to measure attitude of respondents towards basic elements of tourism in Phewa Lakeside are scaling as:

- Very good = 2, Good = 1, Weak, need to improve = 0, which are given in the table with *sign.
- Attitude of number of respondents and total number of respondents is given in the table without any sign.

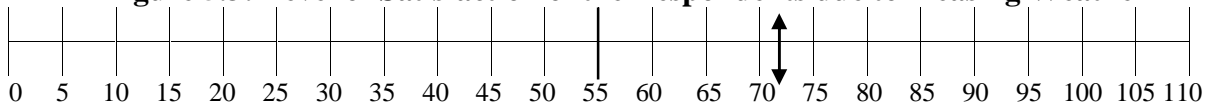
- Value and total value of very good and good is summated and given in the table with #sign.

Table 5.16: An Assessment of Basic Elements of Tourism in Lakeside

S.N	Element	Respondents			Total Respondents
		Very good	Good	Weak, need to improve	
1.	Pleasant Weather (cool, fresh air and warm sunshine, sunset etc)	*2 22 #44	*1 28 #28	*0 5 #0	55 #72
2.	Scenic Attraction (scenery, landscape, mountain, Lakes, water falls, glaciers, cave, forests deserts etc)	*2 32 #64	*1 22 #22	*0 1 #0	55 #86
3.	Historical and Cultural factors (tradition, religion, art, rites, rituals, ceremonies etc)	*2 18 #36	*1 23 #23	*0 14 #0	55 #59
4.	Amenities				
i.	Natural (Beaches, Sea, Streams, Bathing, Fishing, Mountain Climbing, Trekking, Viewing etc)	*2 28 #56	*1 24 #24	*0 3 #0	55 #80
ii.	Man-made (Entertainment facilities, boating, Yachting, dancing, playing etc)	*2 33 #66	*1 21 #21	*0 1 #0	55 #87
5.	Accessibility (Transportation facilities, road, rail, air, water etc)	*2 19 #38	*1 25 #25	*0 11 #0	55 #63
6.	Accommodation (Hotels, restaurants, resorts, home stay etc)	*2 34 #68	*1 19 #19	*0 2 #0	55 #87

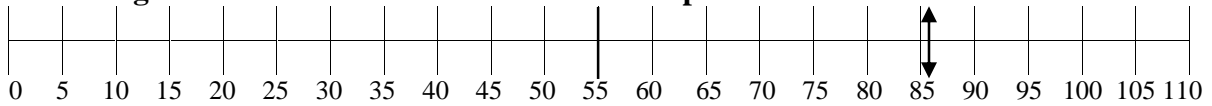
Source: Field Survey, 2008

Figure 5.3: Level of Satisfaction of the Respondents due to Pleasing Weather



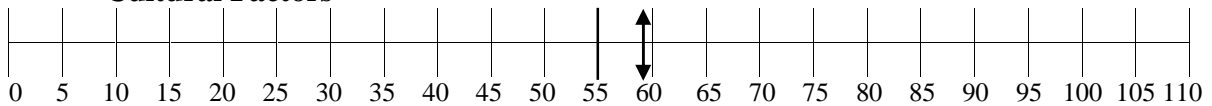
Level of satisfaction due to pleasing weather is 72 i.e. an average area of satisfaction. It symbolizes that the respondents' average satisfaction with pleasing weather of the place.

Figure 5.4: Level of Satisfaction of the Respondents due to Scenic Attraction



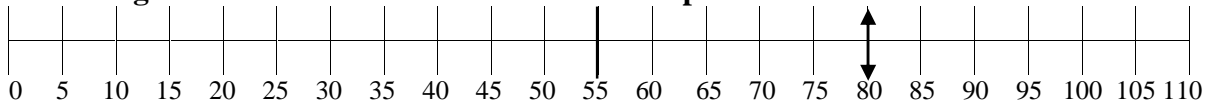
Level of satisfaction due to scenic attraction is 86 i.e. on higher area of the scale. It symbolizes that the respondents' satisfaction with scenic attraction of the place.

Figure 5.5: Level of Satisfaction of the Respondents due to Historical and Cultural Factors



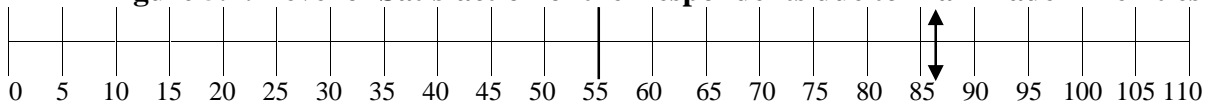
Level of satisfaction due to historical and cultural factors is 59 i.e. on very near to middle of the scale so it symbolizes that the respondents' very less satisfaction with historical and cultural factors of the place.

Figure 5.6: Level of Satisfaction of the Respondents due to Natural Amenities



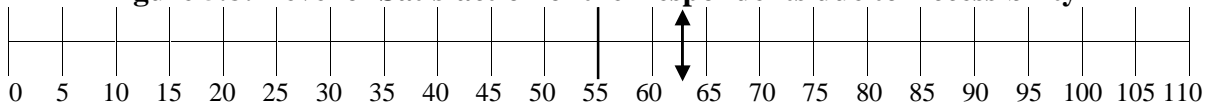
Level of satisfaction due to natural amenities is 80 i.e. on average area of the scale so it symbolizes that the respondents' average satisfaction with natural amenities of the place.

Figure 5.7: Level of Satisfaction of the Respondents due to Man-made Amenities



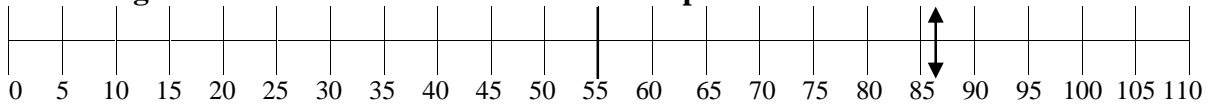
Level of satisfaction due to man-made amenities is 87 i.e. on higher area of the scale so it symbolizes that the respondents' satisfaction with man-made amenities of the place.

Figure 5.8: Level of Satisfaction of the Respondents due to Accessibility



Level of satisfaction due to accessibility is 63 i.e. on near to the middle area of the scale so it symbolizes that the respondents' little satisfaction with accessibilities of the place.

Figure 5.9: Level of Satisfaction of the Respondents due to Accommodations



Level of satisfaction due to accommodations is 87 i.e. on higher area of the scale so it symbolizes that the respondents' satisfaction with accommodations of the place.

5.13 Trend of Tourist Arrivals in Nepal and Pokhara

5.13.1 Tourists Arrival in Nepal and Length of Stay (1990-2007)

As already been mentioned, the tourists started visiting Nepal freely soon after the event of democracy in 1950. But rapid progress of tourist arrivals in Nepal seems after the restoration of democracy in 1990. Table 5.17 Presents trends of tourist arrivals from 1990 to 2007 in Nepal, mode of transport and their length of stay.

Table 5.17: Tourist Arrivals in Nepal & Length of Stay

Year	Total		By Air		By Land		Average Length of Stay
	Number	Growth Rate %	Number	Percent of Total	Number	Percent of Total	
1990	254885	*NA	226421	89	28464	11	12.00
1991	292995	15.0	267932	91	25063	9	9.25
1992	334353	14.1	300496	90	33857	10	10.14
1993	293567	-12.2	254140	87	39427	13	11.94
1994	326531	11.2	289381	89	37150	11	10.00
1995	363395	11.3	325035	89	38360	11	11.27
1996	393613	8.3	343246	87	50367	13	13.50
1997	421857	7.2	371145	88	50712	12	10.49
1998	463684	9.9	398008	86	65676	14	10.76
1999	491504	6.0	421243	86	70261	14	12.28
2000	463646	-5.7	376914	81	86732	19	11.88
2001	361237	-22.1	299514	83	61723	17	11.93
2002	275468	-23.7	218660	79	56808	21	7.92
2003	338132	22.7	275438	81	62694	19	9.60
2004	385297	13.9	297335	77	87962	23	13.51
2005	375398	-2.6	277346	74	98052	26	9.09
2006	383926	2.3	283819	74	100107	26	10.20
2007	526705	37.2	360713	68	165992	32	11.96

(*NA- Not Available)

Source: Nepal Tourism Statistics, 2007, GoN Ministry of Culture, Tourism and Civil Aviation

The number of tourist visiting Nepal has increased each year except in the year 1993, 2000, 2001, 2002 and 2005 respectively. In 1993, 2000, 2001, 2002, 2005 the trend of tourist arrival had decreased by 12.2 percent, 5.7 percent, 22.1 percent, 23.7 percent, and 2.6 percent respectively due to the conflict situation in the country. The number of tourist visiting in Nepal increased by 15.0 percent in 1991, 14.1 percent in 1992, 11.2 percent in 1994, 11.3

percent in 1995, 8.3 percent in 1996, 7.2 percent in 1997, 9.9 percent in 1998, 6.0 percent in 1999, 22.7% in 2003, 13.9 percent in 2004, 2.3 percent in 2006 and 37.2 percent in 2007.

5.13.2 Tourist Arrivals in Nepal by Month (2006/2007)

Seasonality plays the vital role for tourism. Tourists visit different parts of the world in their favorable time and month. March, October and November are the favorable months because the weather of Nepal is pleasant during these months. Most of the visitors visit Nepal to spend their vacation. June and July are not favorable for tourist for third world tourist. But for Indians June is the favorable month because the weather of Nepal is cool as compared to India. Table 5.18 shows the tourist arrivals in Nepal by month wise in the period of 2006 and 2007.

Table 5.18: Tourist Arrivals in Nepal by Month (2006/2007)

Months	Arrivals					
	Third Country		Indian		Total	
	2006	2007	2006	2007	2006	2007
January	21126	25857	7643	7335	28769	33192
February	21320	33133	4408	6801	25728	39934
March	30169	48022	6704	6700	36873	54722
April	18435	32794	3548	8148	21983	40942
May	13517	23296	9353	12558	22870	35854
June	11841	18937	14369	12379	26210	31316
July	15066	26160	10117	9277	25183	35437
August	24966	37658	8184	7025	33150	44683
September	26327	38813	7035	6739	33362	45552
October	43026	65745	6644	4899	49670	70644
November	37402	46822	6717	5451	44119	52273
December	27009	33458	9000	8698	36009	42156
Total	290204	430695	93722	96010	383926	526705

Source: Nepal Tourism Statistics, 2007, GoN Ministry of Culture, Tourism and Civil Aviation

5.13.3 Tourist Arrivals by Purpose of Visit (2006/2007)

Tourists travel with various purposes. Nepal is destination of nature and culture for tourist. Tourist visited for pleasure accounted to 27.7 percent in 2006 which further increased to 37.2 percent in 2007. It is simply because of that pleasure tourists want to visit country, where there is peace and order.

Majority of the foreigners visited Nepal is with the purpose of Holiday Pleasure. The tourists who visited with this purpose were 27.7 percent in 2006 and 41.4 percent in 2007. 19.2 percent of the tourists visited Nepal with the purpose of trekking and mountaineering, 4.6 percent, 10.0 percent and 4.1 percent tourists visited Nepal by purpose of business, pilgrimage and official task respectively in 2007. Rest 20.7 percent of tourists visited Nepal with the purpose of study, family visit, special mission etc. in the same year 2007. 27.7 percent, 12.7 percent, 4.0 percent, 11.3 percent and 3.4 percent tourists visited Nepal by the purpose of holiday pleasure, trekking and mountaineering, business, pilgrimage and official task respectively in 2006. Table 5.19 presents the purpose of tourists visiting Nepal during 2006/2007.

Table 5.19: Tourist Arrivals by Purpose of Visit in (2006 and 2007)

Purpose of visit	2006	Percentage	2007	Percentage
Holiday Pleasure	145802	27.7	217815	41.4
Trekking and mountaineering	66931	12.7	101320	19.2
Business	21066	4.0	24487	4.6
Pilgrimage	59296	11.3	52594	10
Official	18063	3.4	21670	4.1
Others	72766	40.9	108819	20.7
Total	383926	100	526705	100

Source: Nepal Tourism Statistics, 2007, GoN Ministry of Culture, Tourism and Civil Aviation

5.13.4 Tourist Arrivals by Major Nationalities (2006/2007)

Tourist arrivals in Nepal in 2006 and 2007 were recorded 383,926 and 526,705 respectively. It is observed that the tourist arrivals from Asia continent was the largest and in second position took the Western Europe. North America stood in third position. Eastern Europe came in fourth position. Australia and Pacific took fifth position. South and Central America stood in sixth position and only the smallest percentage of tourists came to Nepal from Africa. Tourist arrivals by major nationalities of the world are presented in table 5.20.

Table 5.20: Tourist Arrivals by Major Nationalities (2006/2007)

Nationality	2006	Percentage	2007	Percentage
North America	24566	6.4	37182	7.1
South and Central America	4764	1.2	6486	1.2
Western Europe	97278	25.3	140630	26.7
Eastern Europe	10613	2.8	16634	3.2
Asia	231812	60.4	304225	57.8
Australia and Pacific	9763	2.5	14506	2.8
Africa	1125	0.3	1350	0.3
Others	0	0.0	1277	0.4
Not specified	4005	1.0	3515	0.7
Total	383926	100	526705	100

Source: Nepal Tourism statistics, 2007, GoN Ministry of Culture, Tourism and Civil Aviation

5.13.5 Tourist Arrivals by Age Group and Sex (2006/2007)

Tourist arrival in Nepal is differing with age and sex. It is known that numbers of male tourists are higher than that of the female tourists. In 2007, male visitors comprised 55.2 percent of the total arrivals while female visitors accounted for 44.8 percent. Likewise, age group recorded that highest share recorded by the 31 to 45 age group followed other years group. Data has given in the table 5.21 and has cleared the inflow of tourists by age group and sex, 2006 and 2007.

Table 5.21: Tourist Arrivals by Age Group and Sex (2006/2007)

Age group	2006	Percentage	2007	Percentage
0-15	37433	9.8	38870	7.4
16-30	75626	19.7	112879	21.4
31-45	123541	32.2	164488	31.2
46-60	95260	24.8	130756	24.8
61& over	52066	13.6	69927	13.3
Not Specified	0	0	9785	1.9
Total	383926	100	526705	100
Male	218818	57.0	290688	55.2
Female	165108	43.0	236017	44.8

Source: Nepal Tourism Statistics, 2007, GoN Ministry of Culture, Tourism and Civil Aviation.

5.13.6 Contribution of Tourism Sector

The contribution of tourism sector, as the share of GDP, as percentage of total foreign exchange earning is presented in table 5.22. The share of tourism in GDP of the country was 3.8 in 1995/96 and 3.0 in 1996/97. Recently in 2006/07, it is decreased to 0.9 percent only. It is due to the fall in tourist arrivals and their spending. The foreign exchange earning from tourism as the percentage of total foreign exchange earning of the country was highest in FY 1995/96, which was 21.4 percent. Recently the share of the tourism earning as the percentage of total foreign exchange earning declined to only 4.4 percent in FY 2006/07.

Table 5.22: Foreign Exchange Earning from Tourism (1995/96- 2006/07)

Year	Total Foreign Exchange Earning from Tourism (Rs. in million)	As % of Total Foreign Exchange Earning	As % of GDP
1995/96	9521.2	21.4	3.8
1996/97	8523.0	17.6	3.0
1997/98	9881.6	15.2	3.3
1998/99	12167.8	15.9	3.6
1999/00	12073.9	8.8	3.2
2000/01	11717.0	7.4	2.9
2001/02	8654.3	6.1	2.1
2002/03	11747.7	8.2	2.6
2003/04	18147.4	11.4	3.7
2004/05	10464.0	6.1	1.8
2005/06	9556.0	4.6	1.5
2006/07	6176.0	4.4	0.9

Source: Nepal Tourism Statistics, 2007, GoN Ministry of Culture, Tourism and Civil Aviation

5.13.7 Tourist Arrivals in Pokhara

Pokhara is the popular tourist destination where most of the tourists opted to spend few days while visiting in Nepal. Thus, Pokhara is known as second tourist destination in the country. Both domestic and foreign tourists enjoy there the most. Pokhara has many enjoyable things and natural beauty than other places of the country. The table 5.23 presents that the share of tourist visiting Pokhara.

Table 5.23: Total Tourist Arrivals in Pokhara (1995-2007)

Year	Tourist Arrivals in Pokhara	Total Tourists Visiting Nepal	Share of Pokhara Percentage
1995	63782	246135	25.91
1996	86504	271101	31.91
1997	92717	288419	32.15
1998	103895	320455	32.42
1999	105546	350843	30.08
2000	95095	367731	25.86
2001	77853	296917	26.22
2002	50533	208691	32.61
2003	59435	251769	32.80
2004	65679	294971	22.26
2005	57125	278964	20.47
2006	70600	290204	24.32
2007	123944	430695	28.77

(The Figures exclude Indian tourists)

Source: Tourism Office, Pokhara, 2008

“If you have not visited Pokhara, you have not visited Nepal” (Hagon), this indicates that most of the tourists visit Pokhara to grab Pokhara’s beauties of nature and culture. Table 5.23 shows the trend of tourist arrivals in Nepal and Pokhara. The tourist arrivals in Pokhara had also decreased like the tourist arrivals of other parts of Nepal in conflict period. 70,600 tourists visited Pokhara in 2006 and the percentage of share in Pokhara was 24.32 percent. Likewise 123,944 tourists visited in Pokhara in 2007 and the percentage of share in Pokhara was 28.77 percent. It indicates that the tourist arrivals of Nepal and Pokhara both increasing.

5.13.8 Correlation Coefficient of Tourist Arrivals in Nepal and Pokhara.

The relationship between total number of tourist arrivals in Nepal and total number of tourist arrivals in Pokhara is examined to proof that both are correlated.

Where, x = Tourist arrivals in Nepal in thousand
y = Tourist arrivals in Pokhara in thousand

Table 5.24: Computation of Coefficient of Correlation (1995-2007)

Year	x	y	xy	x ²	y ²
1995	246	64	15744	60516	4096
1996	271	86	23306	73441	7396
1997	288	93	26784	82944	8649
1998	320	104	33280	102400	10816
1999	351	105	36855	123201	11025
2000	368	95	34960	135424	9025
2001	297	78	23166	88209	6084
2002	209	50	10450	43681	2500
2003	252	59	14868	63504	3481
2004	295	66	19470	87025	4356
2005	279	57	15903	77841	3249
2006	290	71	20590	84100	5041
2007	431	124	53444	185761	15376
n = 13	3897	1052	328820	1208047	91094

To find the relationship, we use the following formula:

$$r = \frac{n \sum xy - \sum x \sum y}{\sqrt{n \sum x^2 - (\sum x)^2} \sqrt{n \sum y^2 - (\sum y)^2}}$$

$$r = \frac{13 \times 328820 - 3897 \times 1052}{\sqrt{13 \times 1208047 - 3897^2} \sqrt{13 \times 91094 - 1052^2}}$$

$$r = \frac{175016}{\sqrt{518002} \sqrt{77518}}$$

$$r = \frac{175016}{719.72 \times 278.42}$$

$$r = \frac{175016}{200384.44}$$

$$r = 0.873$$

$$n = 13$$

Significance of test:

$$H_0: \rho = 0 \quad [\text{i.e. } r \text{ is insignificant}]$$

$$H_1: \rho \neq 0 \quad [\text{i.e. } r \text{ is significant}]$$

Test statistics t is,

$$\begin{aligned} t &= \frac{r}{\sqrt{1 - r^2}} \sqrt{n - 2} &= \frac{0.873}{\sqrt{1 - (0.873)^2}} \sqrt{13 - 2} \\ &= \frac{0.873}{\sqrt{0.237}} \sqrt{11} &= \frac{2.894}{0.237} \sqrt{11} &= 12.210 \end{aligned}$$

Now, tabulated t at 5% level of significance,

Two tailed for $n - 2 = 13 - 2 = 11$

The tabulated value of t at 5% level of significance, 11 degree of freedom for two tailed test is 12.210

Decision:

Calculated t > tabulated t

H_0 is rejected

i.e. r is significant

r is significant, it means that when the tourist arrivals in Nepal increases, then tourist arrival of Pokhara also increases. It shows that most of the tourists visiting Nepal want to visit Pokhara also.

5.13.9 Tourist Arrivals in Pokhara by Major Nationalities

Tourist arrivals in Pokhara from major nationalities are shown in table 33. Tourist arrivals in Pokhara in 2006 and 2007 were recorded to be 70,600 and 123,944 respectively. In the years 2001 to 2006 tourists were decreased in Nepal and Pokhara because of the internal conflict in the nation. But the record of 2007 is very high which shows the future prospect of tourism business in the nation and Pokhara.

Table 5.25: Tourist Arrivals in Pokhara by Major Nationalities (2006/2007)

Country	Tourist Arrivals in 2006	Tourist Arrivals in 2007	Percent increased
USA	2,748	7,095	158.18
UK	4,596	4,596	0
Germany	3,790	3,790	0
France	*NA	4,793	*NA
Japan	13,063	17,669	35.26
Australia	*NA	3,108	*NA
China	4,825	11,216	132.45
Others	41,578	71,677	72.39
total	70,600	123,944	75.56

(NA- not available) (The figures exclude Indian tourists)

Source: Tourist Office, Pokhara, 2008

In table 5.25 the tourist arrivals in Pokhara from Japan was the highest in 2006 and 2007. it was 13,063 in 2006 and 17,669 in 2007. The total of tourist arrivals in Pokhara from Japan was increased by 35.26 percent in 2007 compared to 2006. Likewise tourist arrivals from USA increased 158.18 percent in 2007 compared to 2006. At the same time from china increased 132.45 percent in 2007. It shows that the numbers of tourists from major nationalities are increasing. It further shows the bright future of tourism business in Pokhara.

5.13.10 Tourist Arrivals in Pokhara by Month

The tourist arrivals in Pokhara vary by month. Tourist arrivals in Pokhara by month are presented in table 5.26.

Table 5.26: Tourism Arrivals in Pokhara by Month 2007

Months	2007
January	9,877
February	10,711
March	11,605
April	9,141
May	9,621
June	4,971
July	5,804
August	7,661
September	10,941
October	16,901
November	16,520
December	12,891
Total	123,944

(The figures exclude Indian tourists)

Source: Tourism Office, Pokhara, 2008

The tourist arrivals were high in the month of October, November and December. In the month of October highest number of tourist visited Pokhara in 2007. The number of tourist visited in this month was recorded 16,901. Likewise it is low in the month of May, June and July. Months from September to January are the favorable season of tourist arrivals. Tourist arrivals rate for the rest of the month are normal. June is the off-season for tourist arrival in Pokhara. The heavy rain in June and July makes tourist hesitate to visit Pokhara.

CHAPTER-VI

SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.1 Summary

Tourism industry has played an important role to develop economic condition of Nepal. Development of tourism sector has contributed to increase employment and income generation of the country and makes balance regional development. Nepal is famous for natural beauties, like Mt. Everest, the highest peak of the world and snow-peaked mountains, a number of lakes, waterfalls, rivers and rivulets. Cultural heritages like temple of Lord Pashupatinath, Lumbini, the birth place of Lord Buddha, the homeland of brave Gurkhas and the brave Sherpas, the ethnic and lingual diversity etc all exist in Nepal. So, Nepal has become the attractive destination for tourists all over the world.

The present study is based on both primary and secondary data. The secondary data were collected from different publications and Department of Tourism, Government of Nepal. Likewise, the primary data were collected by administering the questionnaire, observation, discussion and survey of hotels/lodges and other people of Phewa Lakeside Pokhara. The major conclusions of the study are described here under.

From the study it is found that out of 55 total surveyed people about 11 percent people are illiterate, 38 percent people have completed primary school, 34 percent people have completed secondary education, 7 percent people have completed intermediate education and about 9 percent people have completed graduate education. All together around 89 percent of the people are literate. The literacy rate among the studies population is quite high than the national literacy rate. It can be inferred from the above information that due to the flow of tourists in the study area the number of educated people is high compared to illiteracy people.

Survey found that in the context of traditional rites and rituals, about 29 percent, 58 percent, and 13 percent respondents of field area are giving their views as unchanged, slightly

changed and totally changed, respectively. The data shows that changing in traditional activities is being high rate because of tourism activities from abroad.

Now in Lakeside, People are maintaining their living standard in better ways in comparison to the past few years because of the tourism activities. A part from the tourism business, the people of Lakeside are engaged in different kinds of activities for their livelihood such as agriculture, trade, private service, government service etc. are the main occupations of the local people. But they conduct their activities in modern way because of inflow of the tourists from different places.

Similarly, out of 12 hotels, about 42 percent, 33 percent and 25 percent hotels have invested their money in lower, middle and higher standard hotels in Lakeside respectively. There are many hotels with lower standard due to the lack of sufficient money to invest. In the matter of employment that out of 12 hotels, about 25 percent, 42 percent, 25 percent and 8 percent hotels generate the employment opportunities less than 5 staff, 5-10 staff, 10-20 staff and above 20 staff, respectively. It has shown the increasing employment in different hotels in Lakeside, Pokhara.

The tourists visiting Nepal are interested to visit Pokhara, in 2007, 28.77 percent of them visited Pokhara. The main tourists activities are sight seeing, mountaineering, bird watching, boating, nature hike and so on. Most of the people believe that the presence of the hotels and vehicles have an adverse effect on the environment. The wastage left by the tourists could not be maintained in proper way. Solid waste management and a dumping site is the most important problem in Lakeside. So, it is obvious that a really well organized sanitation, a proper solid waste management and environment friendly dumping site are the most essential conditions for the successful and eco-tourism development in the study area.

The socio-cultural life of the people changed as compared to their previous habitual activities. Modernization has improved most of the cases. Old cultural activities are disappearing day by day. Most of the family members are gone abroad with the help of tourists. Some of Nepali women with foreign boy and foreign girl with Nepali boy had got married. Tourist individually also support the local people for the education of children and

provide donation to local club. Education of local people also increased with the help of practical experience in different fields of tourism activities.

It is imperative to keep local tradition in tact for tourism development in Pokhara. If we are loosing our culture, we also loose our identity and our way of life. Tourism in Lakeside becomes sustainable when natural and man-made both environments are protected. We should be careful that tourism must not destroy our natural environment. We should minimize pollution of water, air, soil and forests because tourists mainly travel to Pokhara for the natural beauty. Besides, tourists have a keen interest in Nepalese culture especially, Gurung and Thakali culture of Pokhara.

6.2 Conclusion

Phewa Lakeside Pokhara, a pleasant and picturesque tourism destination, located in Kaski district, is characterized with natural beauty, scenic attraction and cultural diversity. The area enjoys the climate of humid sub-tropical monsoon to cool temperate monsoon climate. It is inhabited by simple and friendly people having their vast cultural diversity. The site is suitable for eco-tourism development. The eco-tourism related activities such as eco-trekking, sight seeing, mountain viewing, study of bio-diversity, cultural study, worshipping, boating, swimming etc. can be performed. The above mentioned eco-tourism activities can have significant impact on surrounding environment, employment, education, health, culture, agriculture and income level of local people. It increases living standard of those people as a whole. Accessibility pleasant climate, richness of natural beauty, suitable place for viewpoint, richness in bio-diversity and native culture of simple and friendly people make Phewa Lakeside a unique eco-tourism destination. The natural resources in Phewa Lakeside are still existed well but these are not free of problem such as; noise and air pollution, unsightliness and visual pollution, solid waste pollution, threat on wildlife and biodiversity, Eichhornia Crassipes/jalkumbhi, lake eutrophication and siltation etc are the major.

Eco-tourism principally concerns experiencing the natural or cultural environment without threatening it. In this point, the natural beauty and cultural purity of this area are still much. Moreover, people's interest is towards the preservation of existing environment for the

sustainable tourism and economic condition. To protect the loosing beauty and environmental factors, principles of eco-tourism are essential. Local people and tourist both are seems to be unaware of environmental degradation, so the main ethic of eco-tourism 'leave only foot prints take only photographs' is very essential to apply in this area.

Mainly the environmental problem of Phewa Lakeside seems related to the institution based problem. Phewa Lake Area Conservation Committee as a leading body of Phewa conservation is playing the significant role to protect it but still the problems are occurring such as encroachment, solid waste polluting, covering with Jalkumbhi, siltation, noise and air pollution, lake water pollution, threat to bio-diversity etc. these could be minimized much by forming and regulating daily actions of a small committee, i.e. 'Phewa Sanitation Committee'. Moreover, awareness programs mainly focusing the hotel and lodges owners are essential for the sustainability of the tourism in this area.

6.3 Recommendations

Of the total tourist visiting Nepal in 2007, 28.77 percent visited in Pokhara. The growing inflow of tourists in Pokhara can not be underestimated. Tourism in Pokhara plays the vital role for the socio-economic development as well as the permanent sources of foreign currency earning for the country as well. Similarly, local people or local owners are also benefited from tourism. Thus, this sector should be promoted. In order to promote further tourism generally Pokhara and specifically Lakeside the following recommendations are suggested.

) The Phewa Lake is polluted by Jalakumbhi. It is challenging to protect from Jalakumbhi. It can be controlled by herbicides, mechanical harvesting and bio-control. Bio-control method is preferred in Phewa Lake under the supervision of experts. But nowadays, Lakeside is equally suffering from sanitation problems. There are no well drain and drainage facilities in the city area. Waste and wastage are scattered in uncontrolled way. Rubbish and wastage left by the local people and tourists can be seen everywhere in the main market as well as surrounding areas of Lakeside. People do not feel the property

rights. The lake is polluted by the drainage of the heavy rain from Harpan Khola and Khahare Khola.

-) People in Pokhara wear foreign dress. They do not want to wear their traditional dresses. They want to copy and wear as foreigners. If we compare this area to other rural parts of the country it seems vulgar. At the same time young people use drug, some of them learned by the tourists.
-) The core problem of the Lake area seems to have the lack of responsibility on the part of various stakeholders like local people, tourists, governmental and non-governmental organizations, municipality etc. This seems to have come about largely due to the lack of institutions to plan and monitor the impacts and implications of the activities of different stakeholders on the environment of the lake.
-) People used to store the construction materials on the road. The roads are black topped but it is not maintained. Stakeholders of the common resource have little incentive to conserve it. The owners of hotel/lodges on the Lakeside discharge their waste into the lake water. It is making the lake polluted. There is no provision for sewage disposal in Pokhara. Household waste water is either left open or drained into small and narrow ditches along the road side it is mixed on the lake. Many people in the Lakeside have connected their sewage systems to the storm drainage system, which drains directly into lake. The lake is also polluted as it the place of washing clothes and swimming pond for the cattle.
-) Historically, people have been free to dump waste and construct any type of building they want and disrupt the scenery. In recent years, people have even connected their septic tanks to the storm drainage system, which empties into the lake. The increasing use of the lake water for washing clothes and cattle swimming is another example.
-) The tragedy of the commons constitutes perhaps the most powerful bias against environmental, economic and social sustainability and over time this can spread to larger areas. Government institutions capable of dealing with common property problems are often weak and subject the political influences. The ineffectiveness of the municipality in

exercising its power to protect the environment is a case in point. The management of natural and environmental resources (i.e., the lake) is subject to the decisions made by various actors at various levels, which in turn, affect the quality & quantity of the lake's environment.

-) The problem of Phewa, seems essentially the problem related to institution based. There are too many owners and users who are seeking short-run profits from using the lake's beauty and environment. There are many organizations established to protect the environment. Responsibilities overlap among all the authorities and it appears that rules and regulations are neither enforced nor monitored.
-) Environmental problem is the main issue than other in Lakeside Pokhara. Nowadays, unhealthy things like noise pollution, air pollution and water pollution are common in Lakeside. Likewise traffic problem is another issue, which is reluctant to serve the local people because tourists hire the vehicles in high price which is unaffordable to the locals. The historical Phewa is being polluted due to the negligence of Local People as well as tourists. There couldn't be found proper system to use the lake.

6.4 Recommendations for Future Directions

-) Local people as well as tourists should be aware of environment protection and preservation of nature. The loosing beauty of the Phewa Lake certainly reduces the number of tourists in Pokhara, if it goes continue few decades.
-) Lake eutrophication and siltation is the serious problem of Phewa, it may be completely filled in 100 to 175 years. So, check dams at the confluences of Harpan, Phirke, Khahare, Andheri Khola are very essential.
-) The Jungle, Raniban area on the western side of Phewa is very suit for the eco-tour and trekking. So, it would be better to develop this area as an eco-pleasure and tour destination.

- J Eichhornia Crassipes/Jalkumvi the most notorious aquatic weed is also a serious problem of Phewa. It can be controlled by herbicides, mechanical harvesting and bio-control. Bio-control method is preferred in Phewa Lake under the supervision of experts or it can be controlled by forming and regulating daily actions of a small committee, i.e. 'Phewa Sanitation Committee'.
- J Liquid and solid waste disposal in and around the lake is negligible. So, it is necessary to implement the rules and regulations strictly.
- J Phewa Lake is the prominent attraction of Pokhara, but due to encroachment of lake mainly from local people and hotels, its attraction is decreasing. Therefore, it is very late to take care of the environment of Phewa Lake and Lakeside by local, visitors, various institutions, municipality and the Government of Nepal as well.