

Chapter 6

Forestry and Ecotourism

Z.H. Khan and R.A. Khan*

Abstract

Pakistan is a land of contrasts, therefore, got high prospects for the developments of eco-tourism in the country. Due to diverse climatic conditions, topographies and soil types, the area accommodates various forest covers, rangelands and agricultural areas. The Alpine ranges, temperate tropical and subtropical forests of Northern area are famous for their unique wildlife species of deer, pheasants and reptiles. Since the population pressure is increasing, thus, there is huge burden on natural resources leading to the exploitation of forest covers, range resources and farmlands for food and other life requirements. Wildlife parks, safari parks, game sanctuaries and game reserves have been created to save the wilderness environment and the related wildlife resources, which provide excellent opportunities of recreation/eco-tourism to residents and foreign guests. Five major rivers passing through middle of the country, associated dams, lakes and wetlands harbor great variety of fish, ducks, geese, storks, egrets and cranes visiting Pakistan for over wintering. World's most famous mountain peaks, glaciers and snow covered mountains along with their associated cultures have got attraction as tourism sites and recreational spots thus invite millions of naturalists for all over. Our heritage sites with their rich historical background are worth seeing from eco-tourism development point of view. Though in the flourishing stage but the industry of eco-tourism has strong prospects for future developments and if properly restructured, funded and managed on scientific lines can serve backbone for the economy of Pakistan.

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6.1. Introduction

According to the International Ecotourism Society (TIES-1990), ecotourism is defined as “Responsible travel to natural area that conserves the environment and improves wellbeing of the local people”. The Ecotourism Society of Pakistan (ESP) defines the ecotourism as “A travel activity that ensures direct financial support to local people where tourism activities are being generated and enjoyed” (Anonymous 2012; 2013). The importance of ecotourism has been recognized internationally as well as locally almost in the same manner. It basically involves the visiting of national and international community (travelers/eco-tourists) to undisturbed natural areas without degrading the local environment. Another important component of ecotourism is the economic welfare of local people, which is considered as its integral part. Local people as host are the most important stakeholders of ecotourism industry, so, the travelers must respect local cultures at their destinations. Moreover, along with other developments, a part of the income generated through tourist activities must be spent for the wellbeing of people belonging to ecotourism communities. Similarly, successive development and improvement steps are important to generate interests of local people. Instead of scatted and unplanned development, the government agencies should construct hotels, tourist resorts and create other related facilities at selected sites to properly accommodate tourism activities. Another vital aspect of ecotourism is the conservation of natural environment which should not be disturbed, damaged or degraded at any cost to operate the ecological aspect of ecotourism in the real sense. To ensure all this, the concerned stakeholders especially the travelers and local peoples should be educated and made aware of the significance of environment and nature conservation for ecotourism. Necessary information about all important tourism spots should be published in the form of booklets to guide the nature lovers and tourists, and the same information be made available on the country ecotourism website to facilitate international tourists (Raza 2001; Mock and Neil 1996).

Since 1980, the ecotourism has been considered a significant enterprise by environmentalists who are cautious and concerned to save, preserve and conserve all the components of environment as gift of nature for the coming generations. The concerned naturalists always stress upon the sustainability of such fragile environmental sites and natural areas. From forester point of view, ecotourism means traveling and visiting of forests having wildlife, lakes, rivers, mountains and many other worth seeing natural places located in there. No doubt, forests are the best places of recreation, leisure and pleasure for the nature loving tourists.

The word “ecotourism” has been derived from tourism. It nullifies the conventional negative impacts of tourism activities on local environment and helps in conserving the cultural transition of the local dweller communities. Conservation of environment means the conservation of climates, sites, soils, waters, heritages and biodiversity along with raising the living standard of local peoples. It is generally

said that overall affect of sustainable tourism is positive and the peoples associated with ecotourism should be generously nature loving.

A renowned ecologist and eco-tourist Martha Honey gives an elaborated definition of ecotourism. She has enlisted seven important characteristics of ecotourism given as under:

- 1) It involves traveling to natural destinations.
- 2) It helps minimizing negative impacts of the travels.
- 3) It enhances the environmental awareness among local as well as the international travelers.
- 4) It provides direct financial benefits to local peoples living at the tourist spots
- 5) It ensures financial benefits to countries for the conservation of natural tourist spots.
- 6) It guarantees the respect of local culture by the visiting tourists.
- 7) It supports human rights and democratic movements of local communities.
- 8) It provides opportunities for constructive use of leisure time and helps in knowledge development.

Ecotourism is considered as an industry for foreign exchange earning and generating income for local people. Pakistan is land of diverse cultures, people and landscapes thus have tremendous scope for local and international ecotourism. In Pakistan, tourism has been stated by “Lonely Planet” magazine and the industry has attracted 1 million tourists during 2012.

6.2. Ecotourism Development in Pakistan and Worldwide

Pakistan is a land of diverse cultures and traditions. It has beautiful landscapes and natural resources. Its heritage sites, plains, deserts, rivers, mountains, glaciers, lakes, wetlands, forests, wildlife and other renewable resources are unique in the world. The country posses four distinct seasons on account of its topographic diversity which help in the production of a wide range of farm commodities in the farm of cereal crops, fiber, fodder, fruit, vegetables and many other useful byproducts. The existing variety of natural resources and the environmental conditions reflect tremendous scope of ecotourism development in Pakistan. Following natural resources have a lot of potential for the promotion of ecotourism in Pakistan (Eja et al. 2009).

Forestry and ecotourism are very important and integral components affected by local environmental conditions. Forest is considered the main stay of ecotourism development and promotion all over the world. This is also fact that these days ecotourism is considered as the biggest industry for income generation.

The United States of America generates \$ 3 billion dollars from visitors/tourists every year. This earning is mainly based upon the people visiting forests, national parks, lakes and sea shores of the country. Accordingly, ecotourism has been

considered as the main economic hub of many other countries like China, Hong Kong, Nepal, and Switzerland etc. It was estimated that during 1998, there were 157 to 236 million international eco-tourists worldwide and the number of visitors moved to zoos to watch wildlife species were estimated to be from 79 to 157 million. Global value of ecotourism during 1998 was estimated as high as 1 trillion US dollars. Due to wide range of beautiful landscapes, variety of forest covers, wetlands and diversity of related wildlife, Pakistan have tremendous potential and scope for the development and promotion of ecotourism in the country (Raza 2001).

The importance of travel and tourism to global economy has been increasing during the past decade. It is now arising as the major contributor to global economic development. It generates more than US \$3.4 trillion in gross output and employees more than 200 million people worldwide. It invests more than US \$ 693 billion per annum in new facilities and equipments and, US \$655 billion in direct and indirect taxes each year. The World Economic Outlook (WEO) presents that worldwide GDP growth is estimated at 3.2% for 2003 and 4.1% for 2004 in this industry (Anonymous 2013).

6.2.1. Climate of Pakistan

Climate plays a key role in the biodiversity of flora and fauna. Climate in the country varies from cold alpine zone (northern mountains) in the North to the hot coastal belt in South. More than 90% of the area has the subtropical dry climate including arid and semi arid zone (Chapter 2). From annual rainfall point of view, there are two types of climate found in the country especially in the Indus basin i.e. Monsoon and Mediterranean climate. Lower Indus plain has subtropical and tropical climate. Northern areas of KPK (Khyber Pakhtoon Khawh Province) have alpine climate that changes into moist temperate in Swat, Mansehra, Hazara, Malakand and Abbottabad. Whereas at the same elevation of 6500-11000 m on Eastern side, moist temperate climate becomes dry temperate and cover Diamir, Chitral, Dir, Waziristan and Northern Baluchistan. Subtropical climate supports broad-leaved evergreen forest in the upper parts of Punjab and broad-leaved deciduous forest in the Indus plains consisting of lower Punjab and upper Sindh. Coastal belts of the inundated delta of Indus River along Arabian Sea have the unique mangrove forest. Alpine regions are surrounded by mountainous ranges of Karakorum, Himalayas and Hindukush and have alpine climate. This area has prolonged winter with no or very short summer. Snowfall is the distinguishable feature of this region and tree growth is confined up to timberline at an elevation of 12000 to 13000 feet. These climatic and ecological zones have rich biodiversity of fauna and flora to attract the eco-tourists and accommodate innumerable destination spots which can be utilized for the promotion of ecotourism in the country (Mock and Nile 1996; Siddiqui 1997).

6.2.2. Mountains of Pakistan

Pakistan has world's famous mountains ranges consisting of Karakorum, Himalayas and Hindu Kush. Five of the 14 highest peaks of the world above 8000

m height lie in the Karakorum and Gilgit Baltistan region which are considered as a part of the Great Himalaya Range. Pakistan is also famous for being the home of the world's second highest mountain peak K-2. This mountain range extends up to North and Northwestern parts of Baluchistan province and surrounds its capital i.e. Quetta. In addition, there is another famous mountain range, the Koh-e-Suleman (3480 m high) that extends up to the province of Sindh and joins Kirthar hills. The highest mountain peaks of Karakorum, Himalaya and Hindu Kush are K2, Nanga Parbat and Tirchmir which are located at the height of 8611 m, 8125 m and 7708 m respectively with the ranking of 2nd, 9th and 33th highest peaks in the world. Most of the high peaks lie in the Gilgit Baltistan with few exceptions which are located at more than 700 m in the Hindu Kush mountain range.

No doubt many eco-tourists all over the world are attracted and fascinated by these highest mountains ranges but they cannot touch the highest peaks being very difficult to climb. Since hiking is tedious and dangerous sport therefore needs training and skill for enjoyment. All these mountains have unlimited opportunities of ecotourism.

Table 6.1 Glimpse of the highest peaks is given in the following table

Name	Height (m)	Location	Rank (Pak)	Rank (world)
K2	8611	Karakorum	1	2
Nanga Parbat	8126	Himalaya	2	9
Gasherbrum I	8080	Baltoro Karakorum	3	11
Broad peak	8051	Baltoro Karakorum	4	12
Gasherbrum II	8035	Baltoro Karakorum	5	13

The listed mountain ranges in table 6.1 have famous and attractive hill stations like Muree, Sugran, Naran, Kaghan, Ziarrat, Kalam and Swat. By virtue of their natural beauty, these regions are serving as diverse recreational spots thus thousands of visitors/eco-tourists to enjoy this area especially during summer and winter seasons (Israr et al. 2009, 2010).

6.2.3. Glaciers

Glaciers of Pakistan are the symbols of ecotourism. These vary in size and cover the Northern mountains ranges of Karakorum, Himalayas and Hindukush. These glaciers encompass an area of about 17000 km² which is around 15% of the mountainous regions. The total length of glacier in Karakorum mountain range is more than 6160 km². According to an estimate, 37% of the Karakorum region is covered under the glaciated ice. Most famous glaciers like Siachin, Biafo, Baltoro, Batura and Hispar covers an area of 75, 63, 62, 58, and 53 km² respectively and lie in the Karakorum mountainous range. According to the estimates by conservationists, there are 120 major glaciers and numerous smaller glaciers in the Northern highlands of Pakistan and in addition many others still needs to be explored and documented.

The referred glaciers are the biggest bodies of glaciated ice found anywhere in the world and are asset for ecotourism. Gradual melting of these glaciers continues

water flow and feed more than 60 large and small rivers as well as feed the famous dams of Terbela, Mangla and Warsak in Pakistan. Water of these glaciers is in fact a source of life for the people and is highly important for economy of the country. From recreational point of view, these glaciers are important for tourists and attract visitors from all over the world thus help in the development and promotion of ecotourism in Pakistan (Eja et al. 2009).

6.2.4. Lakes

Due to their natural beauty and clean water local lakes are considered excellent touristic sites. All these natural and man-made lakes/reservoirs also have an appealing aesthetic value. Mancher Lake in Sindh province is the biggest natural water body in Pakistan and the largest lake in South Asia. It spreads over an area of more than 160 km². The other highest lake of Pakistan is the Rush Lake which is 25th highest lake of the world located at an altitude of 4700 m. The second highest lake of the country is Karambar Lake located at an elevation of 4272 m and is ranked 31st highest lake in the world. Some other beautiful natural and man-made lakes found in the provinces are Ansoo Lake, Attabad Lake, Borith Lake and Deliputsar Lake. In addition, there are hundreds of small lakes and water reservoirs which serve as wintering grounds for millions of migratory water fowls seasonally visiting Pakistan. The major migratory birds include swans, goose, ducks, cranes, egrets and cormorants. These water bodies also accommodate local wetland species and provide active spots fishing. These lakes house great biodiversity of flora and fauna and help promoting ecotourism in the country. Thousands of local and foreign tourists visit these lakes to enjoy boating, fishing and waterfowl shooting each year (Qureshi 1998; Robert 2000).

6.2.5. Forests

The natural forests, irrigated forest plantations and scatted tree covers are highly important for the stability of environment and help in reducing pollution. Tree covers represent variations in the landscape and help in the conservation of biodiversity of fauna, flora in the relevant ecosystems. There is acute shortage of forest cover in Pakistan in comparison with the international standard (25% of the total area of the country).

Forest cover of the country is about 4.28 million hectares, which constitutes 4.9% of the total geographical area of Pakistan. This is far below the international standard of forest cover area (20-25%) for maintaining an ecological equilibrium. Keeping in view the forest area of countries at global level, Pakistan occupies the much lower position in the world. Current position of forest resources in the country are not only alarming to meet the wood requirements of the nation but lacking control on pollution, increasing environmental hazards and posing threats to wildlife conservation (Qureshi 1998).

Table 6.2 Land utilization statistics of Pakistan and AJK.

	Land use	KPK (Mha)	Punjab (Mha)	Sindh (Mha)	Baluchistan (Mha)	NA (Mha)	AJK (Mha)	Total (Mha)
1	Geographical area	10.17	20.63	14.09	34.72	7.04	1.33	87.98
2	Forest area	1.40	0.57	0.65	0.29	0.95	0.42	4.38 (4.9%)
3	Not available for cultivation	4.05	3.19	6.13	11.16	N.A	0.71	25.24 (28.7%)
4	Cultivable waste	1.04	1.86	1.26	4.69	N.A	0.03	8.88 (10.1%)
5	Cultivated area	1.92	11.99	5.68	1.66	N.A	0.17	21.42 (24.3%)
6	Reported area (2+3+4+5)	8.41	17.61	13.72	17.80	0.95	1.33	59.82 (68%)
7	Area not classified	1.76	3.02	0.37	16.92	6.09		28.16 (32%)

Source: Raza (2001)

Table 6.3 Wood production, requirement and deficiency in Pakistan.

Years	Types of production	Wood production	Wood requirement	Wood deficiency
1975-86	Timber	1.33 Mm ³	2.08 Mm ³	0.74Mm ³
2000	Fuel	3.00 Mm ³	4.11 Mm ³	1.11 Mm ³
1987	Timber	13.33 Mm ³	39.36 Mm ³	26.16 Mm ³
2000	Fuel	15.84 Mm ³	61.01 Mm ³	45.17 Mm ³

Source: Quraishi (1998)

Deficiency of timber and fuel wood as shown in table 6.3 is steadily increasing for the last few years and is still in progress. The factual position is that state managed forests provide only 14% and 10% of the total timber and fuel wood needs and rangelands supports about 40% of the total livestock. Due to diversity vegetation covers and related wildlife species, these areas provide massive opportunities for tourists and play a vital role in the promotion of ecotourism.

6.2.6. National Wildlife and Safari Parks

National wildlife and Safari parks created for the conservation of national biodiversity are the other important segment of ecotourism. There are almost 27 national parks located in the forest lands and spread all over the country. These include 5 National Parks of Gilgit Baltistan, 8 of AJK, 5 of KPK, 6 of Punjab one in Sindh and 2 in Baluchistan. In addition, the Safari park, game reserves, wildlife sanctuaries have been developed in these areas. These are the best centers for studying fauna and flora found under typical climatic and ecological zones. All the forests possess numerous picnic and recreational destinations rich in wildlife species, diversity of tree covers and fascinating landscapes thus attract tourists from all over the world. The Tourism Department is launching different development

schemes for the welfare of local host communities in the areas to promote ecotourism in the country.

The forest covers found on highly erected mountains of Karakorum, Himalaya, Hindu Kush mountainous ranges provide beautiful habitats for wildlife. These mountains have snow covered peaks and beautiful milky glaciers which present a unique blend of trees, shrubs, grasses and a wide range of variety flora and fauna thus very rich in biodiversity and landscape. Among these forests, there is an attractive network of rivers, streams, lakes and wetland where very beautiful and rare migratory waterfowls come for overwintering from Siberia. In short, the fascinating green sceneries, attractive environment, natural beauty required for ecotourism are all available in these forests thus have tremendous potential/scope for ecotourism. The government is providing all kinds of recreational facilities, resorts, hotels, motels, restaurants, rest houses and shops to facilitate the visitors for shopping, boarding and lodging. Very attractive handicrafts and dress shops representing different cultures of the regions and provinces are developed to show that Pakistan is land of diverse peoples, and traditions. More than one million local and foreign eco-tourists visit Murree hill station located 65 km in the North of Islamabad (Anonymous 2013).

6.2.7. Wildlife Breeding Centers and Zoos

Diversity of wildlife is an integral component of any ecosystem. The sites having rich and diverse wildlife species are considered more attractive for ecotourism development. Such sites are found all over the country extending from Alpine Forests to coastal region of Arabian Sea. The province of KPK and Gilgit Bultistan is famous for its mighty mountain ranges of Karakorum, Himalayas and Hindu Kush. Due to high altitude and dangerous topographic characteristics, these areas are difficult to be exploited by hunter and poachers. Provincial governments have imposed complete ban on the harvesting forest trees therefore most of the wildlife habitats are undisturbed. Resultantly, these mountainous ranges maintain diverse fauna and flora contributing to richness of biodiversity. Famous local wildlife species found in these mountains are Snow Leopard, Markhor, Black Bear, and Rhesus Monkey etc. Among birds Monal Pheasants, Cheer Pheasant, Koklas Pheasant Kleje Pheasant, Chokar Partridge, See-see Partridge are the famous species.

In the plains of Pakistan, water bodies like canals, rivers, manmade dams, lakes, marshy areas and costal belts provide good habitats to different wetland species of waterfowls, fish, frog, tortoise, turtles, dolphins and crocodiles. In short, Pakistan has wide variety of wildlife found in the forests, deserts, pastures, agricultural fields and wetlands. From conservation point of view, many of the native wildlife species are kept in zoos, wildlife/safari parks, breeding center, game reserves, sanctuaries and national parks developed under the control of Forest and Wildlife Department (Table 6.4). Tourism Department has created different picnic spots, recreational areas, hiking tracks, motels and other related facilities at attractive natural sites to attract eco-tourist locally and from all parts of the world.

Table 6.4 List of zoos, safari parks, breeding center, game reserves, sanctuaries, wildlife parks, national parks and Public Zoos

Zoos	Bhalwalpur zoo, Bhawalpur, Punjab. Hyderabad zoo, hydrabad, Sindh. Islamabad zoo, Islamabad Karachi zoo, Karachi Sindh Landhi, Korangi zoo, Karachi, Sindh Animal theme Parks Jungle world (forestry jungle kingdom) Rawalpindi, Punjab Kund Park, Nowshera KPK Lake view park, Islamabad Safari Parks Jallo wildlife park, Lahore, Punjab Karachi safari park, Karachi, Sindh Lahore Zoo and Safari park, Punjab (Formerly Lahore wildlife parks) also called woodland wildlife park Rawalpindi.
Aviaries	Changa Manga vulture center Lahore (Punjab) Dhodial Pheasantry. (Mansehra K.P.K) Karachi walk through aviary (Karachi Sindh) Lahore walk through aviary (Lahore Punjab) Lake view park aviary (Islamabad Federal Capital) Lakki Murwat crane center (K.P.K) Saidpur Hatchary (Islamabad Federal Capital)
Aquaria	Cliften Fish aquarium (Karachi Sindh) Karachi Munipal aquarium (Karachi Sindh) Landhi Korangi aquarium (Karachi Sindh)
Wildlife Parks	Attock wildlife park (Attock Punjab) Bhawal Nagar wildlife park (Bhawal Nagar Punjab) Bhagal wildlife park (Toba Take Singh Punjab) Changa Manga wildlife park (Lahore Punjab) Jallo wildlife park (Lahore Punjab) Kamalia wildlife park (Toba Take Singh Punjab) Lalazar wildlife park (Abbottabad K.P.K) Dera Ghazi Khan wildlife park (Dera Ghazi Khan Punjab) Gatwala wildlife park (Faisalabad Punjab) Perowal wildlife park (Khanewal Punjab) Raheem Yar Khan wildlife park (R. Y.K. Punjab) Sulemanki wildlife park (Okara Punjab) Vehari wildlife park (Vehari Punjab)
Breeding Centers	Changa Manga breeding center (Lahore Punjab) Faisalabad breeding center (Faisalabad Punjab) Jallo breeding center (Lahore Punjab) Rawalpindi breeding center (Rawalpindi Punjab)

Source: Anonymous (2017)

6.2.8. World Heritage Sites

In Pakistan, ecotourism potential is yet to be exploited as it has beautiful natural resources and world heritage sites which can help to flourish this industry here in the coming years. The country with its diverse culture, people and landscapes has attracted one million eco-tourists in 2012. During 2009, the travel and tourists competitiveness report of World Economic Forum ranked Pakistan at 25th position for its world heritage sites. Thus it can be rightly said that there are bright prospects of ecotourism in Pakistan. The country's heritage sites consisting of the ruins of Indus valley civilization such as Mohanjo Daro, Harappa, and Taxila, to the Himalayan hill stations attract tourists from all over the world. Pakistan is famous to have several mountain peaks over 7000 m as described in detail under previous headings, which attract thousands of adventures and mountain hikers from within Pakistan and from the world over. The North part of Pakistan has many old fortresses of ancient architecture and the beautiful Hunza and Chitral Valleys. It is also home to small Pre-Islamic Kalash Community. The romance of the historic KPK province is timeless and legendary. The Punjab province has the site of famous Alexander's battle on the Jhelum River and the historic city Lahore. Lahore; the Capital of Punjab is also famous for many Moghal architectures such as Badshahi Mosque, Shalimar Garden, Tomb of Jhanger and the Lahore fort. Before the global economic crisis, Pakistan was receiving more than 5,000,000 tourists annually. This number came down to minimum since 2008 due to local instability and religious extremism. Many countries have declared Pakistan as unsafe and dangerous country for tourists. The five sites viz. Taxila, Lahore, Karakorum Highway, Karimabad and Lake Saiful Maluk are the valuable heritage assets of Pakistan. The Prime Minister of Pakistan launched the "Pakistan marketing campaign in 2007" to promote tourist visits to unique and varying cultural heritages. This campaign involved various events throughout the year including fun fairs and religious festivals, regional sporting events, various arts and craft shows, folk festivals and opening of several historical museums. All five provinces of the country viz. Punjab, Sind, K.P.K, Baluchistan and Gilgit Blistan, and the three territories viz Capital Territory of Istamabad, federally administrated Tribal Areas and Azad Jammu and Kashmir (AJK) are the centers of various religions settlements present there long before the creation of Pakistan. The cultural and physical diversity has made the country a paradise for tourists, foreign travelers and adventurers.

Pakistan encompasses six major heritage sites recognized as UNESCO'S world heritage sites which include (Anonymous 2017):

- 1) Archaeological ruins at Mohengo Daro of the Indus valley civilization
- 2) First century Buddhist ruins at Tokht-i-Bahi at Saha-i-Bahlol
- 3) The ruins of Taxila from the Gandhara civilization
- 4) The Lahore Fort and Shalimar Garden in Lahore
- 5) Historic monuments of the ancient city at Thatta
- 6) The ancient fort of Rohtas

On the basis of research, conducted by the Ministry of Tourism, Pakistan in 2004, seventeen more sites have been recognized as world heritage by UNESCO are asunder:

- 1) Badshahi Mosque, Lahore built in 1673 during Mughal Empire.
- 2) Wazir Khan Mosque, Lahore built in 1635 by Wazir Khan. He was very famous “tabib” (Doctor/Surgeon) who did an important operation of the foot of the most beloved wife of Jahangir operation successfully. Tabib was given prize worth of billion dollars and he spent this huge amount to construct the mosque which became famous after his name.
- 3) Tombs of Jahangir, Asif Khan and Akbari Sarai Lahore and Mausoleum built in 1627
- 4) Hiran Minar and Tank, Sheikhpura, built by Moghal empor, Jahangir in 1606
- 5) Tomb of Shah Rukne Alam, a famous sufi of Multan
- 6) Ranikot Fort-Dadu, one of the longest forts in the world.
- 7) Shah Jahan mosque built in 1647
- 8) Chank Handi Karachi tombs built during Moghal empire
- 9) Mohrgarh-Baluchistan one of the oldest Neolithic ruins and archeological sites.
- 10) Rehman Dheri Ismail Khan historical ruins of Indus valley civilization
- 11) Harrapa Punjab historical ruins of Bronze age
- 12) Rani Ghat K.P.K archeological remains of Buddhist monastic complex
- 13) Monsehra Rock edicts
- 14) Shahbaz Garhi rock edicts Mardan
- 15) Baltit fort Hunza valley of Tibetan style fort built in 13th century BC
- 16) Tomb of Bibi Jawindi Bahaal Halim and Ustaad mosque of Jalal-ud-Din in Bukhar
- 17) Port of Banbhore archaeological site of historical port city on the Indus river

In addition, several other buildings constructed before the creation of Pakistan show different cultures and religious attachments existed that time. Actually, this was the result of various wars led to several dynastic and tribes ruling the land. They left various landmarks behind them which have become national icon and valuable tourist sites. Some are given as under:

- 1) Faisalabad clock tower and the eight bazaars
- 2) Altit fort in Hunza valley
- 3) 17th and 18th century tombs of Talpur Mirs
- 4) Faiz Mohal of Talpur Mirs
- 5) Samadhi of Ranjit Singh
- 6) Moghal built tomb of Asif Khan

- 7) Empress market built during the rule of the British empire
- 8) The tomb of Qutb-ud-Din Aibak, the first sultan of Delhi and founder of the slave dynasty
- 9) Mohatta palace built in 1927
- 10) 18th century Omer Hayat mahal
- 11) 19th century Italian Chateau Noor palace
- 12) Drawar fort
- 13) Moghal built Hiran Minar
- 14) One of the oldest salt mines in Asia Khewra Salt Mines
- 15) The 3000 BC built fort of kot DIJI and Faiz mahal in Khair Pur
- 16) 16th century built fort at Sakardu

During post independence time, Pakistan retained/improved its heritage by constructing various artistic sites to commemorate its independence by blending the styles from the past. Some of these are:

- 1) Mannar-e- Pakistan in Lahore
- 2) Faisal mosque in Islamabad
- 3) The mausoleum of the founder of Pakistan, Muhammad Ali Jinnah
- 4) Bab-e-Pakistan. A memorial site for the victims of the independence
- 5) Pakistan mausoleum in Islamabad
- 6) The mausoleum of Allama Muhammad Iqbal. A national poet of Pakistan
- 7) Islam summit minaret to commemorate Islamic summit held in Lahore during 1974.

6.3. Role of Forests

Since forests serve in multidirectional ways therefore mutual relationship between forests and ecotourism is highly significant. No doubt, in any country, ecotourism cannot be promoted without developing forests. Presently despite meager forest cover, this renewable resource is playing a vital role in the national economy. Forests give direct and indirect benefits to the people.

6.3.1. Role of Forests in Ecotourism

The forests protect the nature against degradation. Besides glorifying the natural beauty, these forests moderate the climate and enhance rainfall in the area. From wildlife point of view, the forest covers provide attractive habitats in the form of safe nesting, breeding feeding, drinking sites and escape covers, thus ensure sustainability of biodiversity in the area. All such multidimensional wildlife habitats are attractive destination for the visitors, tourists and onlookers to enjoy their leisure time in peaceful environment. All types of forest cover and the connected landscapes provide recreational facilities to the people thus play significant role in the development of ecotourism industry.

These forests have good capacity and scope of ecotourism promotion. Take an example of Juniper forests of Baluchistan, which are considered as world heritage. These are the second oldest forests of the world found at the elevation of 2000-3000 meters. These are more than 3000 years old. The historical and physical facts about these forests are unique to be considered from ecotourism point of view. Similarly, the mangrove forests of the country are unique in nature and considered a valuable asset for ecotourism in the country. Many other valuable aspects of these forests include aesthetic value, different blooming seasons, tree byproduct and aromatic/colorful leaves which fascinate the eco-tourists.

6.3.2. Ecotourism and Forest Management

It is highly important that forests, rangelands and other vegetation covers be properly managed to make them attractive for tourists. The respective departments be trained and funded to manage the forests and related picnic points, study sites, tourist resorts, hoping centers wildlife parks to enhance tourism activities and numbers visitors. Roads should be built and suitable parking sites be given to facilitate the eco-tourists. Local tourism department should be strengthened to supervise the development work, cleanliness and security measures to be in line with the required facilities for updating touristic sites.

One should have clear concept of forest management to use these areas for ecotourism and other related purposes. Forests are the communities of flora and fauna where the woody vegetation is dominant as compared to other groups of vegetation and animal life. Forest vegetation is composed of many groups of plants, which succeed to exist after a long process of competition and succession under favorable conditions of soil. The succession changes in vegetation lead to the existence of most stable plant community. Being living entities, plant communities act and react with soil and environmental during this process of succession. A harmonious relationship is evolved and ultimately a climax type of plant community settles which shows the perfect balance with the environment. Sound forest management means the maximum procurement of woody and non-woody forest products and services on sustained basis without any damage to the other prevailing sources in the forest area.

The basic need of forest management is not only to maintain dense stands in the natural and manmade forests but also to increase and manage them for future growing prospects. The conservation and developmental approaches of forest sustainability are very important for ensuring regeneration and afforestation. Due to growing population, Over cutting, harvesting and exploitation of forest resources has become a common practice in the country and should be discouraged in all respects. The importance of regeneration and afforestation through natural and artificial means has increased many folds. where as the rate of annual deforestation is much more. As afforestation and regeneration falls much short of the requirement therefore it may take years to add another one million ha in the forest cover. Forest experts have pointed out that it is highly desirable that afforestation programmed should be accelerated as part of forest management by removing physical, legal and financial constraints. Attitude of policy makers and planners to

give low priority to forestry program in the economic planning should be changed. With the help of sound forest management, production of wood per unit area from irrigated plantations and natural mountain forests could be increased manifold.

Second important point of forest management is the protection of growing stock. Forests are damaged through lopping and illicit cutting. Attack of insects, diseases, wild animals, fires and livestock herds also cause a lot of damage to forest cover. These factors also cause serious damage to seedlings. In fact, many of these are the socioeconomic problems because of people residing in and around forests who cut trees for timber, fuel, fodder and plough forest lands illegally. The major reason of this kind damage is because of the absence of burning fuel and fodders for their livestock.

6.3.3. Social Forestry and Ecotourism

Social forestry is a type of participatory forestry that is considered imperative for the increase tree cover in the country (Chapter 9). In such forestry practices, common man directly take part in forestation activates like soil preparation, tree planting, post planting care and tree harvesting. Social forestry focuses on the common interest of associated communities. It is raising and managing trees for the benefits of common people. Community forestry, commercial forestry, Farm forestry, participatory forestry, rehabilitation forestry, amenity forestry are the synonymous terms describing social forestry.

For ecotourism, practice of amenity forestry is considered more important because these forestry exercises are carried out for maintaining beautiful and attractive landscape through ornamental forest trees to arrange recreational pleasure for local visitors and eco-tourists. The significance social forestry in eco-tourism as income generating industry cannot be under estimated in Pakistan. Ecotourism is a worldwide phenomenon that touches the highest and deepest aspiration of associated people. It is also an important element of socio economic and political development in many countries. Take an example of USA where revenue generated by ecotourism mainly comes from the visitors of national park and the income generation has reached up to 3 billion US \$ a year. For the development and promotion of ecotourism in Pakistan, we should take strategic steps to resolve the root causes of environmental degradation by ensuring a significant increase in the existing vegetative cover of the country.

6.4. Socioeconomic and Environmental Impact of Ecotourism

Socio economic and environmental impacts of ecotourism are positive for any country. Eco-travelers and the host people are social components of ecotourism industry. Whereas, economic development for the promotion of ecotourism in the form of constructing approach roads, hotels, restaurants, resorts, establishments of minimarkets, availing means of communication in the area will have economic impacts on local ecotourism development. Similarly, the conservation of natural

fauna and flora and preservation of landscape beauty will definitely leave healthy environmental impacts on ecotourism activities.

In fact, man itself is the key figure responsible for positive and negative socio-economic and environmental impacts on ecotourism. Ecotourism is not only an economical enterprise but also a very important social activity because people of different regions and provinces of the country with different cultures, traditions and even habits have chance to see and meet the foreigners from all over the world. This reflects the social impacts of ecotourism.

Nature loving eco-tourists and hosts are the basic stakeholders of ecotourism, which affect each other significantly. For example, the residents of villages located in the forests or outside generally belong to very poor community. Due to miserable poverty, they harvest timber for fuel wood for domestic purposes thus seriously damage forests. They do illegal shooting and trapping the mammals, birds and other wildlife. Such activities do irreparable damage to ecosystem and withhold to get socio-economic benefits from the ecotourism. Though it is bigger industry that can help in fetching a significant amount of foreign exchange for the socioeconomic development but do to terrorist activity, numbers of eco-tourists visiting the country are declining fast. Therefore, especial attention be paid on this issue and better understanding of the concept of ecotourism be introduced to enlarge eco-tourism activities in Pakistan.

6.5. Ecotourism Trends and Challenges

In Pakistan, tourism industry is in the take off position thus faces on certain challenges, which are summarized as the following.

- 1) Pakistan is a home of diverse people, cultures, traditions, heritage and sizable biodiversity thus attracts several tourists every year. Because ecotourism is still in the growing phase with brighter prospects therefore requires more investments and funds. Building of road toward all attractive tourist spots, organization of recreational/residential facilities and provision of required protection of the guests during field movement are important aspects to be taken care.
- 2) In the past, no serious attention was given on ecotourism department. This kind of odd attitude may damage the marketing of ecotourism and led to large decline in number of travelers to Pakistan. The position needs to be rectified for ecotourism and the sites development in the country.
- 3) Sizable investment and innovations in ecotourism industry is required for development of this industry. This negligence has led to depreciate several eco tourist sites over time. In the annual budgets, less priority is being given to ecotourism which needs to be reconsidered and improved in comparison with other department for the development and promotion of this industry in Pakistan.
- 4) Weak travel facilities, low/hardly trained staff position and marketing effectiveness needs to corrected and improved on priority basis, and the

same was pointed out during 2008- by world economic forum travel and tourism competitiveness report (TTCR). The report ranked Pakistan on 103 out of 124 countries with respect to ecotourism.

- 5) Though work has been done by Ecotourism Department of Pakistan on introducing the Ecotourism Industry through Website but it still needs a lot of improvement. This is age speed, people use internet for getting any tourism related information. Unfortunately, our related websites are hardly upgraded and improved with time thus adversely affecting the enterprise. It needs special attention of the department
- 6) Higher rates of boarding/lodging, un-controlled prices of utility items, food adulteration and high rent of hotel rooms are discouraging for economists and helping to drop their number. This aspect needs well thought reforms to facilitate the enterprise connected people.
- 7) Lack of security measure during touring, horrifying news through print/electronic media and the actual mishaps are playing negative role for the development and promotion of eco-tourism. Suitable steps need to be taken to rectify the situation in support of this industry.
- 8) Though printed materials about worth seeing places and sites are available on the website for the guidance of tourists but it lacks comprehensive information and needs revisions as per latest information. Private agencies are more actively involved in arranging tours for eco-tourists but charge a lot without any renationalization of expenditures. The related government agencies must take steps to correct the situation in favor of comprehensive development of tourism website, improvement of transport facilities, online booking of hotels, management of security risks and on solving other connected issues.
- 9) Research based interventions are highly important to upgrade the eco-tourism facilities and to enhance tourism activities in the country. This can be made possible by creating an active research wing in the local eco-tourism department by involving graduate and post graduate research students from different universities. The eco-tourism research outcomes should then be translated into recommendations to be implemented in letter and spirit for the up gradation of the department and its related facilities to the international standards.

6.6. Conclusion

It is quite evident that ecotourism is directly linked with forests, wildlife, environment and nature. Ultimately any disturbance related to these assets may adversely affect the flourishing of industry ecotourism. Human interventions and natural calamities are the main forces which can play destructive role for tourism management. Though there no control on natural phenomenon, however their impacts can be controlled and minimized by taking suitable measures timely. Similarly, negative role of human being can be managed by training exercises and improvement of education facilities in local communities.

Decrease in forest cover affect the overall environment of an area. It increases temperature, induces erosion, forces out the wildlife species thus have negative impacts on ecotourism. Severe damages in forest cover results in green house effect and led to major climatic changes. These climatic problems damage the overall environment of the area. Decreased rain fall and led to rise in temperature, cause droughtiness and increase chances of forest fire. It is reported during 2009 that the environmental degradation is causing loss of Rs. 365 billion per year in Pakistan. Improvement in forest covers, management of the available forest lands through controlling timber mafia is the task to be addressed to make the ecotourism progressive.

Improvement in the infrastructure, staff position, mobility, updating security measures and enhancing budget allocations are highly important steps for the development and improvement of Tourism Department. This needs substantives efforts at government level to make this enterprise a successive and profitable industry in Pakistan.

References

- Anonymous (2012). A consultancy report for the World Conservation Union, (IUCN), Islamabad, Pakistan.
- Anonymous (2013). Ecotourism Society of Pakistan. Tourism industry crumbling in Pakistan. www.ecotourism.org.pk.
- Anonymous (2017). Wildlife of Pakistan. <http://www.wildlife of Pakistan.com>. Accessed on 28 July 2017.
- Eja, E.L., J.E Out, and A.U. Michael (2009). Socioeconomic implication of ecotourism development in plateau state, Niger. *J. Sustain. Develop. Afr.* 11 (3): 246-264.
- Israr, M., H. Khan, N. Ahmad, M.M. Shafi, S. Baig, M. Rehman, and N. Muhammad (2010). Role of local food and handicrafts in raising ecotourism in the northern areas of Pakistan. *Sar. J. Agric.* 26 (1): 119-124.
- Israr, M., S.M. Shaukat, M.M. Shafi, N. Ahmad, S. Baig and M. Nasir (2009). Role of host community in promotion of ecotourism in the northern areas of Pakistan. *Sar. J. Agric.* 25 (4): 629-634.
- Mock, J. and K.O. Neil (1996). Survey of ecotourism potential in Pakistan's biodiversity project area (Chitral and Northern area): A consultancy report for the World Conservation Union, (IUCN), Islamabad, Pakistan
- Quraishi, M.A.A. (1998). Basics of Forestry and Allied Sciences. A-One Publishers Lahore, Pakistan. pp 310.
- Raza, S.B. (2001). Comprehensive Forestry. Publishers Emporium, Lahore, Pakistan. pp. 524.
- Robert, T.J. (2000). Pakistan Natural Wonders. Oxford University Press, Karachi Pakistan.
- Siddiqui, K.M. (1997). Forestry and Environment. Pakistan Forest Institute Peshawar, Pakistan. pp. 21-27.