

ROLE OF ECOTOURISM IN PROMOTING AND SUSTAINING CONSERVATION OF NATURE: A CASE STUDY OF MURREE FOREST RECREATIONAL RESORT

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Murree is a thrilling hill resort of Pakistan that lies approximately between 33° to 34° North latitude and 72° 42' to 73° 30' East longitude. The elevation of the area ranges from 600m to 2100 m from sea level. More than 1000 visitors pay their visit to this hill resort daily. It is situated about 65km North of Islamabad. This area is geographically known as "Foot hill of Himalayas". Murree is very important location due to its forest cover mainly comprising of Chir pine and Blue pine forests; that not only provide timber, fuel wood, and other non-timber benefits to community but also serve as watershed area and a magnificent picnic spot. Eco-tourism is a multimillion enterprise in Murree. More than one million tourists visit Murree each year. The population of Murree grows up 10 times more than the local population during the hot summer spell in the country and winter season during snow fall. Most of the local people are associated directly or indirectly to this industry. In true sense, Ecotourism plays a vital role in the improvement of socioeconomic conditions of the local community. To find out the role of ecotourism and public preferences towards interest of nature conservation, a survey of visitors was conducted; using a structured questionnaire in three most busy locations, The Mall, Patriata and Bhurban. The reported onsite experiences of respondents were analyzed to identify important factors that motivated them to visit the site and had effect on their conservation attitudes and to assess the visitor's behavior towards forest based ecotourism and analyzed their preferences regarding "quality ranking" as a recreational spot and possible improvements for further recreational development without damaging the habitat. From a total samples of 180 respondents, 52.78 % preferred Muree Hill resort for the enjoyment from the view point of forests flora and fauna and natural beauty, 32.78% responded for general environment, 2.22% for near distance location and 5% did not specify any particular reason for their visit. There is significant relationship between the specific objective "to enjoy scenery and forests" and their first time visit or yearly visit to the forest area. The results of F-distribution at 95 % confidence interval showed significant relationship between specific objective "to enhance knowledge" and their first time visit or the yearly visit to the forest area. The enhanced knowledge about the environment and of forests causes awareness among visitors for the conservation of nature along with tourism development.

Keywords: Ecotourism, forest resources, nature conservation, Murree, Pakistan

INTRODUCTION

Forest produces a wide variety of useful market and non-market goods and services, such as timber, sequestration of carbon, protection of biodiversity and ground water reservoir and they are also popular destination for recreation. In developed countries forests are now managed to a large extent for multi-purpose forestry, where recreation is acknowledged as one of the main contributors to welfare derived from forestry (Zanderson, 2005).

The value of wood-based products and some non-wood products supplied by forest resources can be stated in monetary terms, but the economic values of other forest goods and services cannot be observed through market prices. Some methods have been developed to put value on non-market forest goods and services such as recreational

use. Travel Cost Method (TCM) and Contingent Valuation (CVM) are the most widely used methodologies in the determination of recreational use value of forests around the world (Fehmi, 2006)

Many definitions and types of ecotourism (Wall, 1997; 1999; Orams, 2001; Weaver, 2001) exist but a common theme in most definitions is that ecotourism in natural areas facilitates conservation objectives (Blangy and wood, 1993; Yu *et. al*, 1997) and also promote environmentally sustainable development and conservation (Mercado and Lassoie, 2002). Some authors also involve environmental education and learning as part of ecotourism (Wight, 1993). The importance of ecotourism in promoting environmental learning has been emphasized by Kimmel (1999) and Weiller and Ham (2001). Kimmel (1999) maintains that ecotourism provides an opportunity to promote

environmental education. Weiler and Ham (2001) emphasize that intellectual, emotional and even spiritual connections between people and places are important ingredients of ecotourism experiences.

In developing countries, it is evident that the values that accrue to various stakeholders and sectors are in the form of direct consumptive benefits like timber, fodder, fuel wood, NTFPs, direct non-consumptive benefits like ecotourism, recreational and indirect benefits like watershed functions, carbon sinks, micro-climate, biodiversity & employment. Their values are provided to various users but go completely unrecorded in the state's accounting system. Tourism is an essential component for both economic development and poverty reduction in SIDS (Small Island Developing States). National development strategies must therefore be developed with the recognition that tourism plays an essential role in improving the conditions of inferior segments of society (Ashe, 2005). Ecotourism can make a very positive contribution to sustainable conservation of nature (Mercado and Lassoie, 2002).

The prevailing view is that environmental education and experience, such as that associated with Forest based ecotourism, has positive effects on environmental conservation. It is, therefore, important to measure the extent of environmental learning at forest tourism sites and the impact of such learning on values of visitors and upon their future conservation behavior. Changes in such behavior can be of critical importance for environmental conservation but insufficient quantitative analysis exists of ecotourism's success in achieving educational, conservation and development objectives (Fennell, 2001).

It has been proved that the tourism is linked with the biodiversity and forests and has a direct relationship between the growth of international tourism and the growth of economic output as measured in GDP. For example, in years when world economic growth exceeds 4 % the growth of tourism volume tends to be higher, and when GDP growth falls below 2%, tourism growth tends to be even lower (Ashe, 2005).

Murree is one of the many Hill stations set up by the British in the Himalayan foothills during the 19th century. The site of the station was selected in 1850. The hill station was originally established at 7000 feet elevation for the British troops garrisoned along the Afghan frontier.

The area has sharp variations in physiographic features; precipitation and temperatures have produced highly varying vegetation zones. Three ecological zones, which are indicated by the main species of the existing forests, have been recognized in the area. Kail Zone that occupies steep and very Steep Mountain slopes and occurs generally between 1800 to 2200 meters above MSL (mean sea level). *Pinus wallichiana* (A.B. Jackson) occurs in pure stand and

other principal species of this zone like *Cedrus deodara* (Roxb. Ex Lamb, G. Don) and *Abies pindrow* Royle thrive on higher altitudes. Few broad leaved trees include *Quercus incana*, Roxb., *Q. dilatata* Lindle ex Royle., *Cedrela serrata* Royle., *Aesculus indica* (Wall. Ex Camb). While, scrub zone consists of gently sloping to moderately steep mountain slopes below 1050 meters altitude. The area supports a mixed open scrub trees like *Acacia modesta* (Wall), *Olea ferruginea* Royle, *Mallotus philippinensis* (Lam.) Muell-Arg, *Woodfordia fruticosa* (L.) S.Kurz, *Zizyphus spp.* etc. Shrubs like *Dodonea viscosa* (L) Jacq., *Carissa opaca* Stap ex Haines., *Justicia adhatoda* Linn. etc. thrive as understory.

Main wildlife species of the area include common Indian panther, kaleej pheasant, grey pheasant, black partridge, jackals, and peafowl, barking deer, foxes, common leopard and variety of Snakes. Wild life contributes in visitor's attraction to nature conservation (Wood, 1998).

After having experience of multipurpose forestry development in the developed countries it was found that the recreational facilities are the most pronounced to provide pleasure and well-being of local inhabitants as well as people coming from neighboring areas. This is a form of welfare provided to any society (Chopra *et al.*, 2004).

Tourism is a multimillion enterprise in Murree. The population of neighboring areas gets a wonderful climate and vegetation change at a very comfortable distance. People travel long distances from all over the country to enjoy the beautiful weather and enchanting forest scenery. More than one million tourists visit Murree each year. More than 350 big and small hotels have been constructed in and around the Murree town. The population of Murree swells by more than 10 times during the summer season. Most of the local people are associated directly or indirectly to this industry. In true sense, tourism plays a vital role in the improvement of socio-economic conditions of the local population.

MATERIALS AND METHODS

Survey research design was used for the purpose of this study. Murree is a seasonal picnic spot. The main season begins in December when snow fall starts and ends towards end of February. The second season starts in May-June when almost all other areas are under the hot spell of summer. The study was designed to conduct the surveys in both seasons on three sites namely The Mall, Patriata and Bhurban. These are the maximum tourist catching areas in Tehsil Murree. Questionnaires were prepared to get information from the visitors and interviews were also conducted. Random sampling was done on the three picnic spots. Overall, 200 questionnaires were distributed at different spots of Mall road, Patriata near chair lift and Bhurban. One hundred and eighty correctly filled questionnaires were received back from respondents (Fig. 1). Where needed, interviews were

taken from the group members. For the purpose of comparison, quantitative analysis has been done by using Statistical Package for Social Sciences (SPSS). To get statistical results, data were analyzed through F distribution. The interview was conducted from one person from each group of visitors so the results can be multiplied over big population of the visitors.

RESULTS AND DISCUSSION

The results of the Descriptive statistics of survey conducted in January 2011 showed that almost half of the people coming for the visit of Murree belonged to the neighboring districts. Results shows in Fig. 2 that 48.89% belong to Rawalpindi, Islamabad, and 5% from Kahuta, Wah Cantt and Taxilla, Rawat. While 46% of the respondents belonged to the other provinces of the country especially from Sindh and Interior Punjab, Kohat, Noshehra and other areas of KPK. Most of the tourists find a great temperature and vegetation variation within one drive. But people coming from other parts of the country prefer to visit Murree to get a scenic view of majestic pine forests in a peaceful, secure and friendly environment as compared to other places as Kaghan, Naran and Swat.

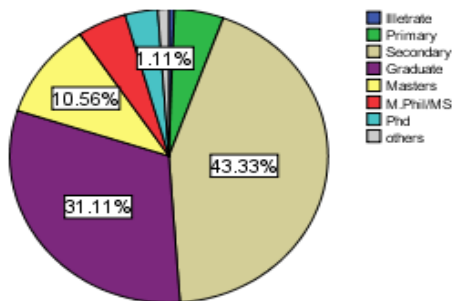


Figure 1. Qualification of the respondents

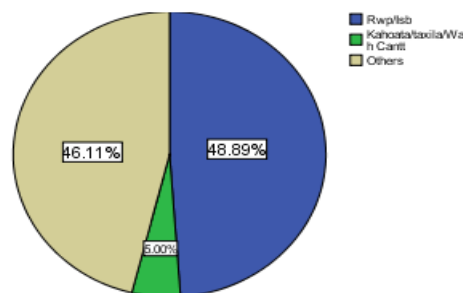


Figure 2. Place of residence of visitors

Regarding different age groups, Fig. 3 shows that maximum visitor's 35.56% belonged to 26-35 years. This age group includes the mid age professionals and newly married couples or parents having one or two kids. This is also reflected by the fact that most of the recreational places have

attractions for children and also moving with small family is easily manageable. While 22.78 % of visitors belonged to 15-25 years age group that are getting opportunity with the school and college trips. About 22.22% included 36-45 years and 19.44% above the age of 45 years. The people more than 45 years of age are accompanying their children and other family members. Visitors from nearby areas of the country prefer to move with whole family for recreation including the elders of the family especially the parents.

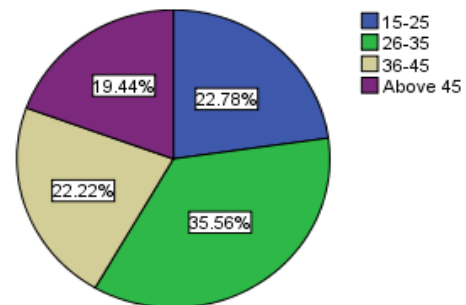


Figure 3. Different age groups of visitors

The interview was conducted from one or two persons from each group of visitors so that results can be multiplied over a large segment of the visitors. Age group 26-35 means those married couples with 2-3 children. 15-25 age groups show the presence of students and young groups. Among each visitors group there were also the family members of above 45 years.

In response to the question that "What is the general objective of the study" 51.11% respondent said kid's entertainment and recreation, while 25% respondent reasoned to spend leisure time. Around 15.5 percent visitors were coming with university, college or school tour.

In response to the question that "why they opted Murree for recreation"? (Fig. 4) 52.78% of the visitors answered that "to enjoy forests and natural beauty". While, 32.78% mentioned to spend time in a friendly environment. Around 2.22% gave reason as the near distance to their residences and 5% answers were not specified.

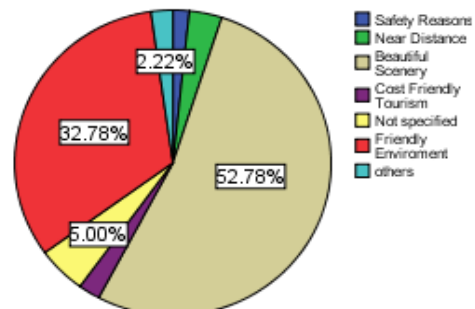


Figure 4. Why visitors opted Murree

The statistical test of F-distribution shows the significant results between occupation and hotel cost afforded by the traveler and occupation and distance covered by the traveler, the higher income of the traveler allowed them to cover more distance for recreation and entertainment and to bear the high cost to stay at the hotel. The families with low income do not travel farther for recreation and entertainment and their low income do not allow them to stay at the hotels. Regarding the profession of all the visitors, it was found that 28.89% were engaged in private business, 28.33% belonged to Government service, 17.78% were students, 56% respondents were house wives while 13.89% were related to different other jobs (Fig. 5).

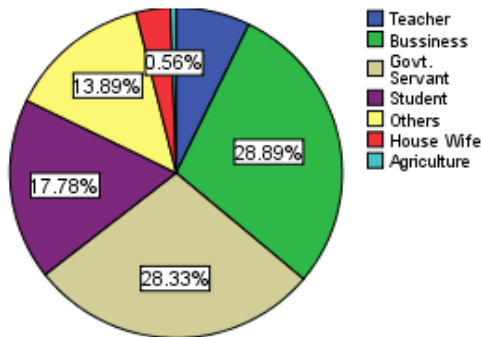


Figure 5. Profession of the respondents

The survey also clarified that 45% respondents belonged to the income group ranging from Rs. 20000-40000 per month, 24.44% earned Rs. 10000-20000 per month, 21.11% earned Rs. 5000-10000 per month and 56% respondents earned Rs.40000 to more than 100,000 per month (Fig. 6).

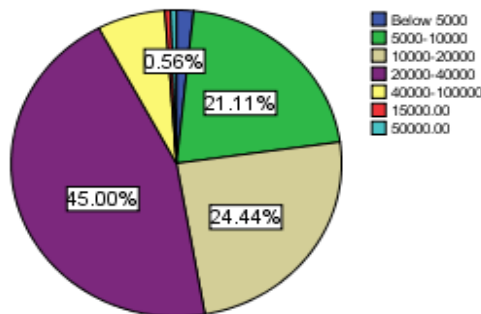


Figure 6. Monthly income of the respondents

There is insignificant relationship between the distance, food expense and occupation. The results of F-distribution at 95 % confidence interval show highly significant relationship between their specific objective “to enhance knowledge” and their first time visit or the per year visit to the forest area. Their trip to these places highly contributed to enhance their knowledge and perception of hill resorts.

There was a significant relationship between the specific objective “to enjoy scenery and forests” and their first time visit or the per year visit to the forest area (Fig. 7). People travel to these areas for any purpose, be it for the search of business. There is highly insignificant relationship between the specific objective “to walking/hiking through forests” and their first time or per year visit to the area. Most of the people do not travel to these locations for hiking and walking through forests (Fig. 8). There is a significant relationship shown by the f-distribution between the specific objective “to observe ecosystem/research” and their first time or per year visit to the forest area. People go to such places to enjoy from the nature point of view, to observe the natural ecosystems and for research/intuition purposes. A well majority of visitors who go to such places either belong to different research organizations or mainly these are student’s community who go there for research and outing purposes.

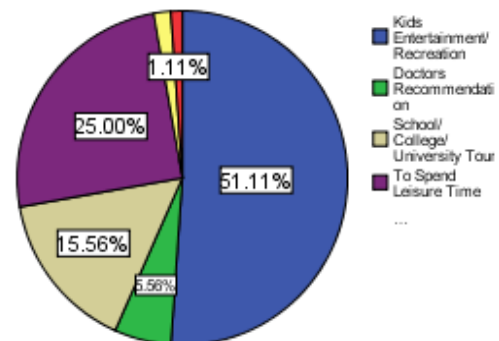


Figure 7. Respondent's general objective to visit Murree

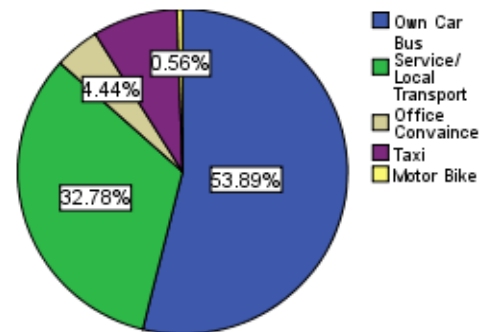


Figure 8. How the visitors reach to Murree

The results of F-distribution at 95% confidence interval show insignificant relationship between specific objective “to enjoy scenery and forests” and “satisfaction from recreational benefits of ecotourism in Murree”. Tourists to the forest area especially Murree are not satisfied with the facilities provided for recreation and entertainment. There is somehow insignificant relationship between the specific objective “to walking/hiking through forests” and “satisfaction from recreational benefits of ecotourism in

Murree". Tourist agrees that when they come to Murree forest area for walking/hiking, they are somehow satisfied from the recreational benefits provided there are sufficient infrastructure facilities. There is a significant relationship between the specific objective "to observe ecosystem/research" and satisfactions from recreational benefits. Visitors are satisfied from recreational benefits as they can easily carry on their research activities and observations about ecosystems.

The results of F-distribution at 95% confidence interval are highly insignificant for "the first time visit to Murree" and "satisfaction from recreational benefits of ecotourism in Murree" and "quality of ecotourism". Those families, who visit Murree for the first time or during their yearly visit, were not satisfied with the facilities provided for recreation and entertainment.

Significant relationship was shown between the objectives "to enhance knowledge" and "to enjoy scenery/forestry". People who visit Murree not only enhanced their knowledge about nature but also enjoyed the scenery and natural forest. Significant relationship was shown between the objectives "to enjoy scenery/forestry" and "walking/hiking through forests"; tourists not only enjoyed the scenery and forestry but also liked walking and hiking in the forests which provided them entertainment.

Significant relationship was shown between the objectives "to observe ecosystem/ research" and "to enjoy scenery/forestry", those who visited hill stations for research purpose and to observe natural ecosystem also enjoyed the scenery/forestry. Insignificant results were shown for the objectives "to enhance knowledge" and "walking/hiking through forests", those visitors who visited for enhancing their knowledge and their trip to the forest area was purposeful, they focused on their purpose and often did not hike through forests. Significant relationship was found between the objectives "to enhance knowledge" and "to observe ecosystem and research"; tourists enhanced their knowledge by their observations of natural ecosystems. Significant results were obtained for the objectives "to walking/hiking through forests" and "to observe ecosystem and research"; tourists who preferred walking and hiking through forests also keenly observed the natural ecosystem.

As it was discussed in a study of the elephant exhibits at Atlanta zoo, active experiences seemed to be more powerful in building pro-conservation attitudes than passive experience of watching elephants and reading, accompanied by graphics (Swanagen, 2000). The present study also suggested that the visitors became more concerned towards conservation of Forests.

The insignificant results were shown by the F-distribution for the "first time/per year visit to Murree" and "safety facilities"; tourists who went for the first time/per year visit, felt insecure of road conditions including the heavy traffic and road safety measures. Significant results were shown of

"first time/per year visit to Murree" and "facilities of food/drinks/lavatory/accommodation"; tourists were satisfied of all these facilities provided during their visit to the forest area.

To evaluate the economic impacts of changes in supply of recreation and tourism opportunities, supply changes may involve a change in quantity, such as the opening of **new** facilities, closing of existing ones or expansion and contraction in capacity. Supply changes may also involve changes in quality, including changes in a) the quality of the environment, b) the local infrastructure and public services to support tourism, and c) the nature of tourism products and services that are provided in an area.

In studies by Khan (2009) the time constraint was also considered to compliment in the utility function. This can be implied as the number of visits will be an increasing function of the environmental quality of the site. To have best transport facilities no of visits can be increased. Encouragement should also be given to investment by local communities in various forms of tourism management through the use of low interest loans by governmental financial institutions and to private business organizations that support implementation of proper forest based ecotourism development.

Tourism has a variety of economic impacts. Tourism contributes to sales, profits, jobs, tax revenues and income in an area. The most direct effects occur within the primary tourism sector, lodging, restaurants, transportation, amusement and retail trade (Weiler and Ham, 2001). Encouragement should also be given to investment by local communities in various forms of tourism management through the use of low interest loans by governmental financial institutions and to private business organizations that support implementation of proper forest based ecotourism development. The funds generated and income raised could be used in the conservation and protection of Forests and other natural resources.

Conclusions: The statistical analysis showed the significant relationship in ecotourism and the objective of gaining knowledge about natural resources. It is obvious through above mentioned results that Ecotourism play an important role in improving attitudes towards conservation of Forest resources and other natural resources by improving knowledge and interest about these resources. The facilities in Murree must include informative programs to be conducted by wildlife rangers and foresters, visitor's center display, amphitheater for film presentations and talks conducted by staff while visitors await their turn to chairlift. Forest museum and lion safari could be developed at the last destination of chair lift in Patriata. This will not only provide best recreation for the visitors but also provide information and motivation which is important to create awareness for forest conservation. Along with Long term

forestry plans, recreational facilities must be improved. While providing recreational facilities, care should be taken to keep the environmental degradation at the minimum.

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