Environmental Impact Assessment of Ecotourism site’s Values

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ABSTRACT

Recently, with rapidly developing economies in Asia, ecotourists from these countries are entering the market as consumers. The experience is expanding with the increase in number of parks. There is now a worldwide increase in nature travel market. Ecotourism has an idealistic agenda, as progressive, educational travel, which conserves the environment and benefits local communities. The synonyms of eco-tourism are given below: environment friendly tourism, nature tourism, green tourism, scientific tourism, cottage tourism, wildlife tourism, wilderness tourism, safari tourism, designer tourism, hard tourism, risk tourism, adventure tourism etc. Nature tourism or ecotourism is based on purposeful travel to natural areas for study, spiritual sensuality of landscapes, flora and fauna in these areas. Environmental effects of projects was examined in construction and operation phases and the components of the physical and chemical, biological and ecological, economic, social and cultural. Results based on Leopold matrix method show performing projects are preferable than not performing, if the management programs and environmental improvements and corrective actions shall be done. The results shows in this area there are environmental damage such as soil erosion and soil compaction, destruction of flora and fauna, water and air pollution, damage to the agricultural economy of the natural landscape of region.

Key words: Environmental Impact Assessment, Ecotourism sites, value, Environmental Effects

Introduction

In 1987, Ceballos-Lascurain defined the ecotourism as ecological tourism or ecotourism involving traveling to relatively undisturbed or uncontaminated natural areas, with the specific aims of studying, admiring and enjoying the scenery and its wild plants and animals, as well as any existing cultural aspects found in these areas. In fact, train journeys to the first North American national parks in the late nineteenth century were called as ecotourism (National Audubon Society, 1991). Johnson(1967) reported heavy over-use of the North American national parks, with traffic congestion and the resulting impacts was erosion and the loss of wilderness.

In recent years Blamey (1997), Fennell (1998), Fennell and Eagles (1989), Orams (1995), Swarbrooke and Horner (1999) and Valentine (1993) have modified, extended and developed many new definitions of ecotourism. The definitions of ecotourism are broad in scope. Ecotourism includes conservation, education, local ownership, and economic benefit for local communities, the relevance of cultural resources, minimum impacts and sustainability. The ecotourism must determine a visitor’s status as an ecotourist and encompass the social motive.

Ecotourism implies travel motivation of good weather, good scenery, sailing, fishing, boating, hiking, and taking advantage of the mineral waters. Tourist activity is not a new phenomenon however, for years, mineral water centers, beautiful beaches and natural attractions have attracted tourists. So that tourism center appears as a pleasant face or natural healing [22].

The impact of ecotourism is similar to the impact of small scale construction, water and sanitation, and roads, but there is an added concern for sensitive environments. Potential adverse impacts include:
- Deforestation from firewood harvesting, camping and construction.
- Deterioration of water resource and quality due to inappropriate design and siting of latrines, septic tanks and solid waste.
- Changes in animal behavior due to human interference.
- Pollution from litter. Oil residues or vehicle exhaust [4].
- Soil erosion or compaction form: poorly designed roads and trails that do not follow natural contours.

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Coghlan [5] challenges the accepted tenet that conservation creates attractive tourist experiences and high satisfaction rates, and explores the nature and value of partnerships between protected area managers and tourism operators. It develops a model to examine the linkages between natural resource management and nature-based tourism industry performance.


Method of Research:

In the light of the above considerations, I want to focus on the following issues in this research article:

- How can ecotourism help to empower local communities and alleviate rural poverty?
- How can ecotourism truly contribute to the survival of endangered flora and fauna?
- How can ecotourism facilitate cross-cultural learning, while diminishing the exploitation of “host populations”?
- How can we ensure that tourism provides both enjoyment and education?
- How can we monitor and protect biodiversity in areas used for ecotourism?
- How can we create harmony, not hostility, between people and the protected areas?
- How can we decrease the negative social and environmental impact of general tourism?
- How can we build businesses that are at once environmentally responsible, socially beneficial and profitable?
- How can we create a process that will promote consensus-driven standards for sound ecotourism?

This research study has been used the Leopold matrix, a procedure for the evaluation of the effect or impact of a proposed development on the environment, and thus, for the evaluation of its ecological benefits and costs. The evaluation comprises an Environmental Impact Statement (EIS).

The Leopold matrix (LM) was developed in 1971, in response to the Environmental Policy Act of 1969. A primary purpose is to ensure that the impact of alternative actions is evaluated and considered in project planning [14]. The current status of 'Gian' has reviewed by observations and interviews with employees of the Department of Natural Resources. The LM provides a system for the analysis and numerical weighting of probable impacts. The analysis does not produce an overall quantitative rating; instead, it portrays many value judgments.

EIA Identifying and predicting in a sample site(Gian,Nahavand):

According to surveys and studies we can outline matrix of environmental impacts during the construction and operation. In Leopold matrix that we use scores is given between -1 to -5 and +1 to +5. Scoring is dependent on the researcher's point. In Table 1 total impact of activities in construction time presents. It seem total impact of activities in construction time is -84 and is negative. By examining the characteristics of environmental and ecological projects of 'Gian' that are ongoing in the area, in this section, we focused on environment impacts of ecotourism projects and its implications on the physical, chemical, biological, and social and economic phase in construction and operation-time. That means in construction time, impacts of environment can be serious. During operation of the project there are environmental impacts. It is evident after projects, changes occur in region; if the impact of the project assessment was hoped that the environmental impact would not be intense. These results are presented in Table 1. Total scores are +85 and positive. That means in operation time environment impacts reduces, due to the care of region's environment increases.

<table>
<thead>
<tr>
<th>Indexes</th>
<th>Total impact of activities in operation time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Source</td>
<td>-1</td>
</tr>
<tr>
<td>Quality of Soil</td>
<td>-2</td>
</tr>
<tr>
<td>Erosions of Soil</td>
<td>-3</td>
</tr>
<tr>
<td>Pollution of Soil</td>
<td>-3</td>
</tr>
<tr>
<td>Aerosols</td>
<td>0</td>
</tr>
<tr>
<td>Weather</td>
<td>+1</td>
</tr>
<tr>
<td>Noise Level</td>
<td>-4</td>
</tr>
<tr>
<td>Flora</td>
<td>0</td>
</tr>
<tr>
<td>Fauna</td>
<td>+2</td>
</tr>
<tr>
<td>Investment</td>
<td>+14</td>
</tr>
<tr>
<td>Employment</td>
<td>+13</td>
</tr>
<tr>
<td>Income</td>
<td>+13</td>
</tr>
<tr>
<td>Population Satisfaction</td>
<td>+17</td>
</tr>
<tr>
<td>Economy</td>
<td>+18</td>
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</tbody>
</table>
Some of the positive effects of the project during construction were 58 and negative effects were 142. Total negative effects during construction are -84. This means that the negative effects of the project on the environment during construction are very high. In evaluating the positive and negative effects of the projects on operation-time +85 were obtained. The following table presents the sum of the positive and negative effects. The results show that development of projects of tourism and ecotourism in the 'Gian' has only a +1. Results shows in Table 2.

Table 2: Sum of positive and negative effects

<table>
<thead>
<tr>
<th>Phase</th>
<th>Physical and chemical</th>
<th>Biological</th>
<th>Health and Safety</th>
<th>Economic, social and cultural</th>
<th>Total Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Positive</td>
<td>Negative</td>
<td>Positive</td>
<td>Negative</td>
<td>Positive</td>
</tr>
<tr>
<td>Construction</td>
<td>0</td>
<td>-99</td>
<td>0</td>
<td>-28</td>
<td>+63</td>
</tr>
<tr>
<td>Operation</td>
<td>+1</td>
<td>-13</td>
<td>+2</td>
<td>0</td>
<td>+104</td>
</tr>
</tbody>
</table>

Results show that the implementation of their projects on priority, but not high enough to benefit plans. So as project development and corrective options are accepted.

The 'Gian' region is one of the areas which have retained its natural pristine state. Actually, environmental impact assessment is a careful and preventive action in order to manage environment and one of the views is the belief that prevention is better than cure. Based on the results obtained from this study it can be said that 'Gian' has the natural potential that are significant environmentally. This area has a major role on surface water and underground water supply in the region, province and neighboring provinces. Any contamination in this region may have a pervasive impact and influence on many people. Implementation plans for developing the natural environment and its use in tourism may cause irreparable damage. As to the present forest cover, flora and fauna have been destroyed with increase tourist activity and it may be the case, if the destruction continues. So it is good that the development of this area be implemented carefully with attention to the natural potentials and to prevent their destruction. Soil of this area is clay, also has high capacity to absorb any liquid. If pollutants like oil, gasoline, car oil, etc. are poured on the soil easily absorbed into the soil and eventually contaminate groundwater.

Waste by tourists is frequently observed in 'Gian'. Another case that has significant impact on environmental degradation in the region is the number of cars that are traveling via tourists. There is also a path in and out of forest that trucks traffic it to transport materials to projects. This factor also contributes to deforestation and soil compression. Main result from this study is that development of tourism projects in one region should not be the destruction of the natural environment. The destruction is seen partly in 'Gian'. The purpose of this research is to reveal the effects of development projects in their work to advance cautiously.

Conclusion:

In this research Ecotourism sites have the best potential for development and management amongst the six sites investigated.

The three approaches that will enhance the restoring Ecotourism sites will be:
1- Planning for Eco-tourism.
2- Orienting the site to receive out of state and international tourists.
3-Launching a new well planed strategy for the management and revenue collection.

Successful ecotourism projects must:
- Effectively promote the preservation of entire local ecosystems, not just individual species, vistas or sites;
- Be sustainable and economically viable in order to attract financing;
- Be well planned, financed, managed and marketed in order to meet the stringent environmental and recreational demands of true ecotourism.

In an era of heightened environmental consciousness and accessibility to exotic locales, countries are busy promoting their natural resources to lure tourists. The strategy of ecotourism is to preserve the natural resources while also promoting and accommodating volumes of tourists. However, most of the popular eco-travel destinations have fragile eco-systems and hence it is important to maintain a careful balance between preservation and promotion -- "sustainable development" -- in order to ensure the long-term health of both the eco-systems and the tourism economies.

The Long term environmental strategic management in this research consists of increasing recreational places for ecotourists, increasing the environmental viewpoints and amazing areas,
planning of environmental long term strategies with attention towards occupation of local people, and increasing their life standards.

For development of ecotourism sites following main recommendations are given: protection and conservation of native flora preparation of jogging tracks, children parks, yoga and meditation centre, cultural and traditional centers, amusement parks.

To develop ecotourism potential of Ecotourism sites, following ecotourism activities are recommended:

- Children and young promenade,
- Management of ecotourism area, proper disposal and reduction of wastes,
- Hosting –serving –cultural and coastal establishment,
- Green space and natural exhibition,
- Concentrated promenade-ecotourism projects,
- Estimation of expenditure promenade projects and ecotourism developments,

Similarly following main plans and models are suggested to develop ecotourism activities.

- Creation of forest parks and zoos,
- Protection of native plant species,
- Conservation of natural sites,
- Management of environmental activities,
- Water park and boating,
- Jogging track and walking roads on hills,
- Yoga and meditation centre,
- Children parks,
- Amusement and children ecopark,
- Water park,
- Ecotourists camp, service centers and ecotourism facilities,
- Establishment of restaurants and residences for ecotourists.

All these developments will be undertaken by involving local people. In almost all the projects proposed for development ecotourism high priority will be given for the jobs and employment of local people. The suggested proposals and plannings will not disturb the nature and interfere the life of villagers in the vicinity of lake. Highest priority will be given to improve the economics and social standard of villagers. Where ever possible women self-help groups will be involved to empower the village women.

References

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