Special issue
Tourism, Hospitality
and Environment
Issues and Challenges

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Back Issue:
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Editorial Address
Chief Editor
Indian Journal of Applied Hospitality and Tourism Research
Banarsidas Chandiwala Institute of Hotel Management & Catering Technology
Chandiwala Estate
Maa Anandmai Marg, Kalkaji
New Delhi 110019, India
Tel: (+91) 11 26382276, 77,
Fax: (+91) 11 26382280
Email: director@bcihmct.ac.in
# CONTENTS

## Research Papers

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suvidha Khanna, Nidhi Pathania</td>
<td>Waste Management in Hospitality Industry: An Empirical Investigation</td>
<td>3-10</td>
</tr>
<tr>
<td>Mudita Nag, Ruchira Bhardwaj, K.C Sharma, and P.D Charan</td>
<td>Environmental Impacts of Tourism at Religious Places – A Case Study of Pushkar (Raj.)</td>
<td>11-17</td>
</tr>
<tr>
<td>Saurabh Kumar Dixit</td>
<td>Sustainable Hotels Vis-À-Vis Destination Sustainability</td>
<td>18-25</td>
</tr>
<tr>
<td>S.Sundararaman</td>
<td>Managing Environmental Degradation – An Effective Tool for increasing Economic Benefits of Tourism</td>
<td>35-43</td>
</tr>
<tr>
<td>R.Narasimmaraj</td>
<td>Mass Tourist Arrivals and Its Impact on Ooty’s Natural Environment</td>
<td>44-52</td>
</tr>
</tbody>
</table>

## Thematic Articles

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>L.S.Nigam, Nikita Swarnkar</td>
<td>Educating for Sustainable Tourism Development</td>
<td>53-62</td>
</tr>
<tr>
<td>Kamal Kant Pant</td>
<td>Promise of village tourism in the rural poverty alleviation and sustainable self employment- the Nepalese experiments</td>
<td>75-85</td>
</tr>
<tr>
<td>Piyush Sharma, Reshma Kamboj</td>
<td>The Social and Environmental Impacts of Tourism - A Case Study of Jim Corbett National Park</td>
<td>86-95</td>
</tr>
<tr>
<td>Sunita Badhwar, Rachna Chandan</td>
<td>Eco-Friendly Cleaning: A Small Step can Lead to a Big Leap in Future</td>
<td>96-102</td>
</tr>
</tbody>
</table>

## Message and View Points

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ghassan Aidi</td>
<td>The Three Biggest Changes I Do Expect to See in 2010 in the Sustainable Development at Hospitality Industry</td>
<td>103-105</td>
</tr>
<tr>
<td>Gour Kanjilal</td>
<td>The Tourism Environmental Issues and Approach</td>
<td>106-108</td>
</tr>
<tr>
<td>M. A. Haque</td>
<td>Environmental Diversity in Indian Tourism</td>
<td>109-115</td>
</tr>
</tbody>
</table>
Preface

Environment is necessary for sustenance of Tourism. The only certainty is change and this is truer than even before when it comes to environment, which is undergoing a slow yet steady degradation due to the never ending quest of human beings towards their own development and modernization. The dizzying rate of change and the accompanying uncertainties has had and will continue to have a disastrous impact on our environment. Eco tourism, Greening, Environment Friendly hotel and tourism have become some buzzwords of the day. It will be challenging task to take leisure and greening together.

Tourism & Hospitality, parallel to each other, are fast growing Industries Globally, and are identified as a climate sensitive human activity by the researchers and hence having more responsibility to protect environment in today’s scenario. Travel influences ecotourism growth in the long run. Scholars have noted the rapid growth of tourism as a significant contributor to emissions attributable to tourism and identified a greater role of Climate in influencing tourist flow to destinations and its sustainability. The environment and sustainable practices of a region has a definite impact on the tourist and their availability.

Significant impact on the increased business situations in the hospitality sector is also being viewed. To sustain these, conservation of Environment is imperative. Ecologically balanced, nature friendly and sustainable tourism should move together and need to be part of tourism strategies. Conscious efforts should be made for maintaining environmental security along with Developmental processes.

In this Special Issue of the Journal, a maiden effort has been made to encompass research papers, articles, case studies and viewpoints. These will be covering broad areas such as Global Warming and Eco Tourism, Social and Environmental Aspects of Tourism, Tourism sustainability and Eco Friendly Practices in Hotels focusing on human, social, financial and environmental perspective deliberating on the Impact of tourism activities on environment, contribution to mitigate impact of Green House Gases on nature and Issues and Challenges that we face in our efforts to undo the damage already done.

We are extremely grateful to Mr. Ghassan Aidi, President International Hotel and Restaurant Association for sharing his expectation and vision in the sustainable development at Hospitality Industry. Launching of Emeraude Hoteliere Certification to Hotel in January 2010 at IH&RA Congress in Serbia will be highly positive step in this direction and is part of tourism industry’s response to the global challenges of the millennium development goals.

Besides containing contemporary perspectives, the real strength of the Journal over the years has been its research based comprehensive coverage of certain timely, crucial and challenging issues of the Tourism and Hospitality Industry. Sustainable development survives a Nation with Social and Economic Enrichment and this in turn satisfies the needs & values of all Interest Groups. And to have this we must ensure that the Environment Conservation Traditions of our Past, which taught us to respect Nature, should be conserved.

With this objective, we have decided to give a thought to this issue to enrich the Intellectual Property of our youth to develop Healthy Environment for sustained Tourism & Hospitality. This small step today can lead us for bigger leap in future in protecting our environment.

Let us get together to preserve this earth.

Chief Editor
Waste Management in Hotel Industry: An Empirical Investigation
Suvidha Khanna, Ms. Nidhi Pathania

ABSTRACT
Waste management is the collection, transport, processing, recycling or disposal and monitoring of waste materials. The term usually relates to materials produced by human activity and is generally undertaken to reduce their effect on health, the environment or aesthetics. As been mentioned by CSIRO, “Management of waste is a basic requirement of ecologically sustainable development”, the same holds true for hotel industry too. In fact, hotel industry consumes a vast range of goods in construction and operations. They generally use huge amounts of energy, consume large amounts of water and generate disproportionate amounts of waste which is in terms of solid, liquid and gaseous. Various studies have pointed out on the fact that there is a dire need for waste management in the hotel industry so that they may meet the environmental norms. Thus, with this backdrop, the present study is conducted to assess the proportions of different constituents of wastes, their handling, treatment and disposal methods in different hospitality settings, more specifically in hotel industry of Jammu. The study is empirical in nature that includes the hotels of Jammu and the data is collected through a questionnaire distributed to the employees of the hotels in the study area, with the aim of assessing the processing systems for waste disposal. The tools used are t-test, ANOVA, correlation and regression, etc. Hazards associated with poor waste management and shortcomings in the existing system are identified. The development of waste management policies, plans, and protocols are recommended, in addition to establishing various training programs on proper waste management for all hotel workers. The results propose the remedies for right disposal of waste in the hotels. The paper develops some of the pertinent issues as well as practices to mitigate the global challenge of climate through proper waste management especially with reference to the ecologically fragile area in this Himalayan State of India.

Key words: waste management, hotel industry, solid waste

Introduction
Management of waste is a basic requirement of ecologically sustainable development. Waste Management is the collection, transport, processing, recycling or disposal and monitoring of waste materials. The term usually relates to materials produced by human activity, and is generally undertaken to reduce their effect on health, the environment or aesthetics. It can involve solid, liquid and gaseous or radioactive substances, with different methods and fields of expertise for each (The Asia Business Forum, 2009). Every task, from preparing a meal to manufacturing a car, is accompanied with the production of waste material, which cannot be used for other things and needs to be disposed of effectively. If not contained and handled properly, waste can balloon into a huge problem. It is estimated that nearly 36 million tonnes of municipal waste was generated in the UK in 2004/05. A total of 30 million tonnes of this waste was collected from households. That's about 500 kg or half a tonne of household waste per person. Although household rubbish represents a relatively small percentage (about 9%) of the total amount of waste produced it is a highly significant proportion because it contains large quantities of organic waste which can cause pollution problems, as well as materials such as glass and plastics which do not break down easily (Waste online, 2006)

Since 1987, when the concept of sustainability was first mentioned on a coordinated international platform with the release of the UN-sponsored Brundtland Commission. The movement towards sustainability has expanded across the globe. Governmental and nongovernmental organizations, corporations and consumers are increasingly focusing on the need to exist in harmony with their surroundings and reduce their environmental footprints. The hospitality is no exception, and finally, the concept of sustainability has begun to gain momentum in this sector (Hospitality growing green, 2008)

Dr. Suvidha Khanna, Asstt. Professor, CHTM, University of Jammu, J&K, India, Email id: urs_suvidha@rediffmail.com
Ms. Nidhi Pathania, Research Scholar, CHTM, University of Jammu, J&K, Email id: nidhi_1_5@yahoo.com
Waste is an issue of increasing importance in the hospitality industry too as environmental issues, government directives and increasing landfill taxes are influencing the society towards more sustainable management of solid waste streams. Heightened environmental awareness amongst consumers and increasing media coverage are factors in persuading hoteliers to embrace environmental issues and institute sustainable practices as part of their operations (Hospitality, Leisure, Sport and Tourism Network, 2002). Many studies have documented the definite concern of hospitality consumers for environmental issues, although corresponding consumer purchase behaviour regarding environmentally friendly products has not been significant, as discussed by Kalafatis, Pollard, East, Tsogas (1999), Smith and Haugtvedt (1997), and others. According to Roarty (1997), there are several constraints on demand for “green” products: cost, persuasion, and competitiveness. In the case of tourism, the consumer decision process may be affected by different variables than consumer goods and other services. According to Smith and Haugtvedt, there are five main sources of influence on the undecided tourism buyer: the media (e.g., news, documentaries, agenda-setting), pressure groups (e.g., Friends of the Earth, Tourism Concern), governments in generating and destination countries, the tourism industry itself (e.g., marketing by individual firms, and professional tourism bodies), and personal organic experiences of negative impacts by the traveler, friends, and family.

While the winds of change have been sweeping through the Indian hospitality industry on one side, there has been an increase in environmental degradation on the other. But heightened environmental awareness amongst consumers and increasing media coverage are persuading the industry to seriously review environmental issues and institute sustainable practices as part of their operations (Towards Zero Waste, 2010). According to the Indian Hotel Industry Survey 2004-2005 conducted by The Federation of Hotel & Restaurant Associations (FHRAI) and HVS International, solid waste production is the least monitored environmental issue with the all India average at 30.7 per cent (Towards Zero Waste, 2010). While the breakdown for five-star deluxe and four-star hotels is not available, this category is believed to monitor environmental issues more closely. This brings us to an uncomfortable conclusion that in most cases, waste is neither an area of concern, nor a segment of focus for a majority of players in the industry, though a small percentile is taking cognisance of it like The Lake Palace, Udaipur reuses old carpets otherwise sold to scrap contractors. Wherever possible, reduce, reuse, and recycle waste is adopted for food, plastic, water or any waste material; The Ambassador Pallava, Chennai follows the system of wet and dry garbage. It segregates waste into glass, paper, metal, wood, etc and sells it to recycle dealers; The Park, New Delhi sells old carpets to staff or reuses internally. Its bed linen, towels are reused for staff. It also segregates wet and dry garbage; The Leela Kempinski, Mumbai donates bed linen, towels, etc to orphanage or uses it as cleaning cloths. It segregates by the type and sells for recycling. It also uses reverse side of the paper for photocopying and envelopes are reused in internal office communication. Also, unused fruits are turned into salads and purees; Maurya Sheraton, New Delhi segregates wet and dry garbage for recycling. It also has a supplier programme for development of returnable packaging. It converts production waste into usable by-products like lemon peel powder for facials in beauty parlours, etc. Moreover, food garbage is used in vermiculture beds to produce garden compost (Towards Zero Waste, 2010). But not many hotels in India are following any waste management strategy despite it being the most significant for the present climatic change and for the global environmental issues.
Though many research studies (Kirk, 1995; Shanklin, Petrillose & Petlay (1991); Trung & Kumar (2005); Chan & Lam (2001); Chan (2001); Chand, Dahiya & Patil (2007) have been conducted to study the waste management strategies and the awareness thereof in the hotel industry, yet no research has ever pointed out about any such strategy to be followed in the hotel industry of Jammu. Thus, realizing the importance of waste management in the hotel industry, an attempt has been made to study the different constituents of wastes, their handling and the strategies for their disposal.

Research Question

Waste management is the collection, transport, processing, recycling or disposal and monitoring of waste materials. The term usually relates to materials produced by human activity and is generally undertaken to reduce their effect on health, the environment or aesthetics, the same holds true for hotel industry too. In fact, hotel industry consumes a vast range of goods in construction and operations. They generally use huge amounts of energy, consume large amounts of water and generate disproportion amounts of waste which is in terms of solid, liquid and gaseous. Various studies have pointed out on the fact that there is a dire need for waste management in the hotel industry so that they may meet the environmental norms. Thus, with this backdrop, the present study is conducted to assess the proportions of different constituents of wastes, their handling, treatment and disposal methods in different hospitality settings, more specifically in hotel industry of Jammu. And finally, to propose the remedies for right disposal of waste in the hotels, and to develop some of the pertinent issues, as well as practices to mitigate the global challenge of climate through proper waste management.

Research Methodology

The study is empirical in nature that includes the hotels of Jammu and the data is collected through a questionnaire distributed to the employees of the hotels in the study area, with the aim of assessing the processing systems for waste disposal.

Survey Instrument

The survey instrument used in the study is self-administered, two part questionnaire. The questions in the first part of the survey asked about the general information i.e. location, bed strength, time of collection of waste, and type of waste, etc. In second part, the questions like agency/personnel involved, transportation from source to collection point, disposal methods used, etc are asked.

Sampling unit

All the “A” Class Hotels in Jammu were approached for the collection of the primary data regarding the Waste Management in Hotel Industry. The Hotels under studies are: - Asia Hotel, Hari Niwas, Hotel Ashoka, K.C. and Hotel Raverra. For each Hotel, to respondents filled in up the questionnaire. Thus in total there were 12 respondents from present study.

Statistical techniques used

The statistical techniques used for the analysis of the data include Percentage method, Mean, frequency and the use of Pie-charts are been made.
Research Outcomes

**BED STRENGTH:-**
All the Hotels under study have the bed strength 35-60

<table>
<thead>
<tr>
<th>BED STRENGTH</th>
<th>NO. OF HOTELS</th>
</tr>
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<tbody>
<tr>
<td>35</td>
<td>02</td>
</tr>
<tr>
<td>57</td>
<td>04</td>
</tr>
<tr>
<td>60</td>
<td>06</td>
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</table>

Two Hotels under study have the bed strength of 35, 4 Hotels have the bed strength of 57 and 6 Hotels have the bed strength of 60.

It is seen in the study that time of collection of wastage in all the areas, i.e. Lobby, Bed Rooms, Wash Rooms, Kitchen, and Laundry Section is between 05:00 a.m. to 08:00 a.m. For evening, the collection time is between 03:00 p.m. to 08:00 p.m. and for night; it is between 9:00 p.m. to 12:00 midnight.

**Table 2. Timings for the collection of wastage in different areas of the hotel**

<table>
<thead>
<tr>
<th></th>
<th>MORNING</th>
<th></th>
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<tbody>
<tr>
<td></td>
<td>5 am</td>
<td>7 am</td>
<td>8 am</td>
<td>3 pm</td>
<td>4 pm</td>
<td>5 pm</td>
<td>6 pm</td>
<td>7 pm</td>
</tr>
<tr>
<td>Lobby</td>
<td>2 4 6</td>
<td>2 4 2</td>
<td>2 2 2</td>
<td>2 2 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bed Rooms</td>
<td>2 4 6</td>
<td>2 4 2</td>
<td>2 2 2</td>
<td>2 2 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wash Rooms</td>
<td>2 4 6</td>
<td>2 4 2</td>
<td>2 2 2</td>
<td>2 2 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kitchen</td>
<td>2 4 6</td>
<td>2 4 2</td>
<td>2 2 2</td>
<td>2 2 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laundry Section</td>
<td>2 4 6</td>
<td>2 4 2</td>
<td>2 2 2</td>
<td>2 2 2</td>
<td></td>
<td></td>
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**Table 3. The collection timing of supportive service**

<table>
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<th>MORNING</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>5 am</td>
<td>7 am</td>
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<td>3 pm</td>
<td>4 pm</td>
<td>5 pm</td>
<td>6 pm</td>
<td>7 pm</td>
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<tr>
<td>Engineer Section</td>
<td>2 4 6</td>
<td>2 4 2</td>
<td>2 2 2</td>
<td>2 2 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kitchen</td>
<td>2 4 6</td>
<td>2 4 2</td>
<td>2 2 2</td>
<td>2 2 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laundry</td>
<td>2 4 6</td>
<td>2 4 2</td>
<td>2 2 2</td>
<td>2 2 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Floor Section</td>
<td>2 4 6</td>
<td>2 4 2</td>
<td>2 2 2</td>
<td>2 2 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 4. Amount of Wastage been collected in the Hotels under study**

<table>
<thead>
<tr>
<th>Types of Waste</th>
<th>1 kg</th>
<th>2 kgs</th>
<th>3 kgs</th>
<th>5 kgs</th>
<th>6 kgs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disposables</td>
<td>2</td>
<td>4</td>
<td>-</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Plastic Wrappers</td>
<td>2 4</td>
<td>6</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Shops</td>
<td>8</td>
<td>4</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Paper</td>
<td>4</td>
<td>6</td>
<td>2</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Table 5. Type and amount of waste:**

<table>
<thead>
<tr>
<th>Types of Waste</th>
<th>10 kgs</th>
<th>11 kgs</th>
<th>21 kgs</th>
<th>25 kgs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Garbage</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>
Containers used are:

Polythene Bags : 16.6%
P.V.C. Container : 83.4%

Diagram 1. Containers used

It is ironic to find out that no hotel under study is opting metallic container for the collection of waste.

Agency/personnel involved in collection:

i. Skilled 83.33%, Hotels go in for skilled and Govt. Agency for the collection of waste.

ii. Non-Skilled 16.66%, only 2 Hotels go in for Non-Skilled and private agency.

Diagram 2. Agency/personnel involved in collection of waste

Transportation from source to collection point

i. Push Cart: No Hotel used push cart for the collection of waste

ii. Trolley: All the 100% hotels make use of this transportation for the collection of garbage and to transport it from source to collection point

iii. Container: Again no hotel makes use of containers.

Diagram 3. Source of transportation from source to collection point

Transportation from collection point to the final disposal site

i. Waste Van 66.7% of the hotels under study use waste van for the transportation from collection point to the final disposal site.

ii. Taggers 33.3%, hotels makes use of taggers.

iii. Municipality No Hotels use Municipality for the same.
Diagram 4. Source of transportation from collection point to the final disposal site

Disposal Method uses:

a. Sanitary Landfills.
   i. Municipal Site 83.3%
   ii. Local Site 16.7%

b. Incinerators:
   No hotels use incinerators for the disposal of waste
   i. Landfills - 18%, hotels use landfills methods for waste management.
   ii. Municipality - 36%, hotels have the final disposals to the municipality

c. Auto-claving: 46% have the Auto-Claving as one of their disposal methods

Diagram 5. Disposal method use- Sanitary landfills

d. Micro-waving: no hotel use Micro-waving as their disposal method.

e. Hydro-puling: Again no hotel use hydro-pulling as their disposal method

Diagram 6. Disposal method use- Incinerators

Surprisingly no hotel in Jammu was found to have its own Sanitation Department and only 66.66% hotels under studies used the automatic type of equipments and all the hotels have their manual type of sanitary equipments. All the hotels manage risks by giving training to their
employees regarding the health hazards of sanitary staff and no hotel under study go in for universal precaution, protective dressing and minimization to manage risks for their staff. All the hotels under study have the quality control system for managing the hotel waste 83.33% under study use colours coded PVC bags/containers and only 66.66% hotels use “Bio Hazards” labels on infectious waste while as only 50% hotels get their service audited/inspected by external agency. All the hotels have their sanitation officers who ensure their quality control.

Conclusion and Suggestions

At present Hotel waste generated by small restaurants is disposed off directly by the hotels at nearby collection spots. The substantial quantity of food waste dumped at these collection spots gets mixed with all the other kinds of dry and wet waste and gives an ugly look to the collection spots with lot of dirt and stink.

In case of large four and 5 star hotels; the hotel waste is disposed off directly by the hotels through MCGM or through private contractors to the dumping ground. But in the hotel industry of Jammu, no such methodology is been adopted. The study showed that no hotel in Jammu is found to have its own Sanitation Department and very few hotels have the equipments to dispose off the waste. It is seen in the study that there are no formal system of disposing off the hotel waste been adopted by the hotels of Jammu and thus a lot has to be done in this sector which can be pointed out in the form of the following waste management policies, plans, and protocols:

1. **Beginning a recycling program.**
   - Conduct a waste audit to identify and quantify recyclable material currently being thrown away.
   - Select materials disposal method before designing the recycling program.
   - Involve the hotel’s employees in all stages of the recycling program.
   - Design and materials flow plan to identify container size and placement.

2. **Starting an Eco-purchasing Program.**
   - Reduce waste by purchasing in bulk or concentrate.
   - Reduce toxicity by using products with less hazardous ingredients.
   - Avoid wasteful products that add to the environmental or economic costs of waste disposal.
   - Repair and reuse products instead of buying new ones.
   - Select products made from recycled materials.
   - Purchase energy efficient equipment that causes less environment harm.

3. **Starting a Green Hotels**
   - A “green” hotel uses resources wisely, incorporating energy, water, recycling and waste reduction techniques into the daily hotel operations. There are a number of advantages for “green” hotels. Most actions that save resources and reduce pollution also reduce operating costs and increase profit margins. Involvement in “green” issues can develop and strengthen guest loyalty.

Hotel managers report that most guests are pleased with the hotel recycling programme and are willing to participate in the hotel’s program. To increase guest involvement, inform guest about the program when they check-in. Some hotels provide guests recycling information cards at the check-in desk or in the guest and the hotel to participate in the growing interest in ecotourism.
Relevance of the Study

- Researchers: will find enough insight for further research regarding the waste management effectiveness in the hotel industry.
- Academicians: The study has direct relevance for academic programmes in hotels and waste management related issues.
- Industry Professionals: It is hoped that the study findings will not only be of academic concern, but will also be beneficial to the industry. Thus the people from hotels, both practitioners and industry leaders will find enough grounds for shaping their waste for the cause of providing better environment and climate to their employees, guests and society as a whole.

Limitations and Future Research

All possible efforts were made to maintain objectivity, validity and reliability of the study, yet certain limitations need to be kept in mind whenever its findings are considered for implementations. A separate study supported with the longitudinal surveys to evaluate the extent of change required to assess the proportions of different constituents of wastes, their handling, treatment and disposal methods in different hospitality settings.

Also the present study is restricted to Jammu only. Thus more studies can be conducted by taking the hotels of other cities also and on the basis of the same, comparative analysis can be made.

References

Hospitality growing green (2008), ‘Global Hospitality Insights: A Publication for the hospitality Industry’
Waste online (2006), www.wasteonline.org.uk
Environmental Impacts of Tourism at Religious Places – A Case Study of Pushkar (Raj.)
Mudita Nag, Ruchira Bhardwaj, K.C Sharma and P.D Charan

ABSTRACT:
Pilgrimage / Tourism to religious places are an old tradition in Indian culture. In the past, inaccessibility, associated risks, a very low level of consumer demand and respect for natural resources played an important role in limiting the impacts of such tourism. The development of infrastructure and consequent settlements and relatively easy access to these areas along with the tremendous increase in population in recent years have surpassed the carrying capacity of these places and ultimately affected the environment adversely. The high temporal seasonality of tourism with its peak in certain seasons or months leads to high pressure on the receiving areas. It results in stress on ecosystem, local culture, and transport system and so on.

The small town Pushkar, lies in North-West of Ajmer (Raj). It is situated around the holy Pushkar Lake and is considered to be a centre of religious and cultural tourism based on the historical temples and rural cultural events like Pushkar-fair. . The annual fair takes place on Kartik Purnima during the month of October-November. The fair is actually a combination of two fairs happening at the same venue, one is the highest exaltation of the lord of creation Brahma and the other is the world’s largest camel fair. Pushkar is regularly visited by a number of both, domestic and foreign tourists witnessing an unprecedented growth of more than 30% in tourist influx every year. The data of the previous year’s showed a steady increase in the arrival of tourists, especially during the Pushkar fair. Results of a survey of the local inhabitants showed that the economy of Pushkar town flourishes during the fair time. Here, tourism acts as an important segment of the economy with a potential to earn foreign exchange and generate employment opportunities. Tourism has also become an important force for social transformation of various cultures. Tourism at Pushkar has both negative and positive impacts. But, in terms of environment, Pushkar stands out as a case of environmentally destructive tourism. Due to mishandling of resources by tourists, the holy town Pushkar which has been a place of scenic beauty, worship and solace, is at present, facing acute problems related to environmental degradation such as despoliation of scenic vistas, destruction of natural habitat, pollution of holy Lake, erosion of soil, and to a certain extent- cultural pollution which threatens its character.

It is analyzed that the water quality of the lake is deteriorating due to anthropogenic activities such as mass bathing, washing clothes, dumping of garbage, puja refuses, and discharge of mortal remains, offering of flowers etc. also due to siltation and shifting of active sand dunes, the lake is gradually shrinking in size and depth. This in turn disrupts the water cycle of the area which ultimately affects the natural climatic trends. It is also observed that tourism at Pushkar has brought along construction of houses, resorts, hotels, tourist villages etc. which has inevitably encroached on previously open spaces such as natural landscapes, agricultural or pastoral lands and has disturbed the bio-diversity of the area. The present scenario is a threat for the sustainability of the town and the Lake. The present paper is an attempt to show the environmental degradation of Pushkar town and the Lake due to tourist activities and to suggest measures for their conservation and to promote ecotourism.

KEY WORDS: Environmental degradation, Kartik Purnima, Pushkar fair, Lake Tourism, Ecotourism,

Introduction

Pilgrimage/Tourism to religious places is an old tradition in Indian culture. In the past, inaccessibility, associated risks, a very low level of consumer demand and respect for natural resources played an important role in limiting the impacts of such tourism (Central Pollution Control Board, 2006). The development of infrastructure and consequent settlements and relatively easy access to these areas have surpassed the carrying capacity of these places and ultimately affected the environment adversely. The high temporal seasonality of tourism with its peak in certain seasons or months leads to high pressure on the receiving areas. It results in stress on ecosystem, local culture, and transport system and so on.

The small town Pushkar, situated in North-West of Ajmer (Rajasthan), is considered to be a centre of religious and cultural tourism based on the historical temples and rural cultural events like Pushkar-fair (Kar, 1986). The annual fair takes place on Kartik Purnima during the month of October-November. Thus, Pushkar is regularly visited by a number of both, domestic and foreign tourists. Maximum tourists visit during Kartik Purnima which coincides with the
cattle fair. The economy of Pushkar town flourishes during the fair time. Tourism has also become an important force for social transformation of various cultures. But it has been pointed out that tourism has a negative impact too. With little or no interest and intervention from state, tourists often tend to mishandle the resources. They consume resources at a much higher rate, leaving a lot of garbage behind. (Mathur and Chowdhary, 1999)

Pushkar Lake is the main focal point of tourist activities especially during the fair time. The water quality of the lake is deteriorating due to anthropogenic activities such as mass bathing, washing clothes, dumping of garbage, puja refuses, discharge of mortal remains, offering of flowers etc. (Singh and Mathur, 2004). Also due to siltation and shifting of active sand dunes, the lake is gradually shrinking in size and depth. This in turn disrupts the water cycle of the area which ultimately affects the natural climatic trends. Analysis of the physico-chemical characteristics of water showed maximum fluctuation during the fair time. Also a large amount of solid waste is generated due to tourist activities, which shows aesthetic degradation (Singh et al, 2004). It is observed that tourism at Pushkar has brought along construction of houses, resorts, hotels, tourist villages etc. which has inevitably encroached on previously open spaces such as natural landscapes, agricultural or pastoral lands and has disturbed the bio-diversity of the area.

The present paper deals with the determination of environmental degradation at Pushkar valley due to tourist activities and to suggest measures for their conservation and to promote eco-tourism.

Study Area

Pushkar situated 12km north west of Ajmer, is one of the major pilgrimage centers in India with over 500 odd temples in and around the city, the most sacred being the Brahma Temple. This holy town is situated around the sacred Pushkar Lake, in the valley formed between two parallel hills of Aravalli mountain ranges running south-west to north-east. It is located at latitude 26° 27' north and longitude 74° 37' east.

Methodology

Water samples were collected from four sampling locations i.e. near Jodhpur Ghat, Brahm Ghat, Gau Ghat and Jaipur Ghat during pre, during and post fair period in the year 2006. The samples collected from these locations are analyzed as per standard procedures. APHA (1992). Table 1: Estimation of various physico-chemical and Biological parameters by different methods (Maiti, 2001).
Apart from sample collection, another phase involved collection of secondary data from CID (Criminal Investigation Department) offices, RTDC (Rajasthan Tourism Development Corporation) hotels, regarding the total inflow of tourists during the past few years. In order to gain more information about the previous and existing environmental conditions of Pushkar interviews and questionnaire surveys were conducted with some NGO’s, government officials as well as localities working for the conservation and management of environment. Also, various meetings were attended focusing the environmental issues at Pushkar.

**Result and Discussion**

It is revealed from the study that tourism played an important role in the degradation of environment at Pushkar. Over the last five year there has been a steady increase in the number of tourism (both domestic and foreign) except for year 2003 when there was a drop in the number of domestic tourist.

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Method used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature</td>
<td>By mercury Thermometer</td>
</tr>
<tr>
<td>pH</td>
<td>By digital pH meter</td>
</tr>
<tr>
<td>Total dissolved solids (TDS)</td>
<td>By digital TDS meter</td>
</tr>
<tr>
<td>Total Hardness</td>
<td>By EDTA titration</td>
</tr>
<tr>
<td>Turbidity</td>
<td>By turbidimetry</td>
</tr>
<tr>
<td>Dissolved oxygen (DO)</td>
<td>By winkler Azide modification method</td>
</tr>
<tr>
<td>Chloride</td>
<td>By Argentometric titration</td>
</tr>
<tr>
<td>Nitrate</td>
<td>By UV spectrophotometric method</td>
</tr>
<tr>
<td>Phosphate</td>
<td>By stannous chloride colorimetric method</td>
</tr>
<tr>
<td>Biological oxygen demand (BOD)</td>
<td>By Direct dilution method</td>
</tr>
<tr>
<td>Chemical oxygen demand (COD)</td>
<td>By reflux digestion method</td>
</tr>
</tbody>
</table>

Table 2. Showing Tourist Arrivals in Pushkar from 2001-2006

<table>
<thead>
<tr>
<th>Tourists</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic</td>
<td>865000</td>
<td>1161859</td>
<td>937850</td>
<td>1065703</td>
<td>1548600</td>
<td>1756540</td>
</tr>
<tr>
<td>Foreign</td>
<td>46182</td>
<td>28413</td>
<td>31190</td>
<td>43980</td>
<td>63312</td>
<td>88485</td>
</tr>
<tr>
<td>Total</td>
<td>911182</td>
<td>1190272</td>
<td>969040</td>
<td>1109683</td>
<td>1611912</td>
<td>1847031</td>
</tr>
</tbody>
</table>

Fig. 2. Showing the plot of total no. of tourists (domestic and foreign) arrived at Pushkar(2001-06)
Physical observation of water in Pushkar however reveals that the quality of water in Lake is deteriorating due to anthropogenic activities. The color of the water is light green due to mass bathing and other human activities..

Table 3. Physico-chemical parameters of water quality of Pushkar Lake

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Units</th>
<th>Pre fair period (Sept.–Oct. 06)</th>
<th>During fair period (Kartik Purnima/Nov. 06)</th>
<th>Past fair period (Dec. 06-Feb. 07)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature</td>
<td>°C</td>
<td>24-28.5</td>
<td>18-19</td>
<td>18-19.5</td>
</tr>
<tr>
<td>pH</td>
<td>Unit</td>
<td>7.8-8.2</td>
<td>7.8-8.6</td>
<td>6.9-7.5</td>
</tr>
<tr>
<td>Total dissolved solids (TDS)</td>
<td>mg/l</td>
<td>111-339</td>
<td>210-609</td>
<td>173-451</td>
</tr>
<tr>
<td>Total Hardness</td>
<td>mg/l</td>
<td>132-156</td>
<td>129-148</td>
<td>108-137</td>
</tr>
<tr>
<td>Turbidity</td>
<td>NTU</td>
<td>53-68</td>
<td>70-94</td>
<td>63-72</td>
</tr>
<tr>
<td>Dissolved oxygen (DO)</td>
<td>mg/l</td>
<td>5.4-8.1</td>
<td>3.8-5.2</td>
<td>5.4-6.5</td>
</tr>
<tr>
<td>Chloride (Cl-)</td>
<td>mg/l</td>
<td>27.9-42.1</td>
<td>36.8-44.7</td>
<td>24.3-38.8</td>
</tr>
<tr>
<td>Nitrate (NO₃⁻)</td>
<td>mg/l</td>
<td>16.8-24.5</td>
<td>20.1-30.4</td>
<td>11.4-17.6</td>
</tr>
<tr>
<td>Phosphate (PO₄³⁻)</td>
<td>mg/l</td>
<td>0.79-1.21</td>
<td>0.75-2.30</td>
<td>0.22-0.91</td>
</tr>
<tr>
<td>Biological oxygen demand (BOD)</td>
<td>mg/l</td>
<td>5.1-6.7</td>
<td>8.3-14.4</td>
<td>6.1-9.1</td>
</tr>
<tr>
<td>Chemical oxygen demand (COD)</td>
<td>mg/l</td>
<td>29.8-35.8</td>
<td>32.8-42.7</td>
<td>30.9-36.1</td>
</tr>
</tbody>
</table>

The temperature of the lake reduces during the fair time (mass bathing time) whereas it is maximum during the month of September i.e. pre fair time. Maximum pH is during the fair time. In the investigation, higher concentration of Total Dissolved Solids (TDS) was noted during Pushkar fair due to the anthropogenic activities. The higher values of total hardness are determined during pre fair time i.e. in the month of September. During the study period, turbidity in the lake water varied from 53-94 NTU. Lower values of DO were noted during Pushkar fair which leads to fish mortality.. Higher values of chloride were observed during Pushkar fair. During the investigation, highest values of nitrate were determined during Pushkar fair time. The highest values of phosphate in lake water were recorded during fair time Biological oxygen demand (BOD) is a very important indicator of pollution load. The highest values of BOD were recorded during Pushkar fair due to increased human activities. The highest values of COD were recorded during fair time which shows the high pollution status of Lake. Similar results were obtained by Hemasundaram et al (2003).

It is observed that apart from the deterioration of water quality of Lake, tourism is also responsible for –

a. Solid waste generation by way of littering towels, tissue papers/napkins, polythene bags etc. due to inadequacy of disposal facilities.

b. Various types of pollution such as air (due to motor traffic and kitchen emission of hotels and restaurants) water (due to mass bathing, discharge of untreated waste water, discharge of mortal remains, offering of flowers etc.) noise (because of motor traffic tourist crowd and the entertainment provided to them) and land (due to solid waste generation.)

c. Loss of natural landscapes, agricultural or pastoral land due to construction of houses, resorts, hotels tourist villages etc.

d. Loss of biodiversity due to destruction of natural habitats, deforestation for commercial purpose.

e. Indirect impacts include disruption of water cycle and food chains and ecosystem functioning.
The present study suggests deterioration of water quality of Pushkar Lake and the environmental conditions of Pushkar town due to tourism, for which the major recommendations are –

1. **Environmental Impact Assessment** : Environmental impact assessments should be undertaken for all tourism developments of till now at Pushkar to evaluate the potential damage to the environment in the light of present tourism activities and forecasted tourism growth and peak demands. Alternative sites in near vicinity of Pushkar for development should be considered, taking into account local constraints and the limits of environmental carrying capacity. This capacity includes physical, ecological, social, cultural and psychological factors.

2. **Government Commitment** : There should be a vision, firm commitment from Government and a policy for sustainable development of Pushkar valley.

3. **Promoting Eco-tourism** :
   a. The Indian Government must formulate eco tourism policy to encourage, eco-friendly practices that focus on harmony with nature and spirituality and to develop the conscious process.
b. Local communities must be involved in the eco-friendly tourist spot development initiative.

c. Government must plan to divert the revenue generated at the tourist places for bio-diversity conservation.

d. There should be plans for establishment of a vegetation profile, study of mangroves, interaction with village groups and holding of seminars and workshops in villages to create awareness of protecting resources.

e. Government should include the bio-diversity in primary high school and higher secondary school curricula in a graded and non-formal manner. Bio-diversity related topics should be introduced in the teacher training and B.Ed. courses as well.

f. Special attention must be given to the aspect of carrying capacity while preparing tourism development plans.

g. Action must be taken in the planned manner to deal with the problem of non-bio-degradable wastes. Intensive campaigning to regulate plastic waste must be launched with the assistance of the private sector and non-government organizations.

h. Special programmes like social forestry, Eco-clubs, Eco-Task Force, Paryavaran Vahinis (Environment Brigades) etc. must be initiated for ecological restoration work.

4. Involvement of Local Communities: Planning authorities should seek out and take into account the views of the local communities in the Pushkar valley on the environmental and social impact of tourism projects and should take advice from the departments of Environmental Studies of the University and colleges in the area. They should also keep in touch with the local NGO’s and should gain from their experience.

5. Education and Awareness: All components of the tourism at Pushkar (host communities, tourists, travel agents, tourism operators, developers, owners and local planning authorities) need to educate themselves on the mechanisms and benefits of an environmental perspective.

6. Special Tourism Policing Group: Some kind of specially trained group, drawing people from all components of tourism activities, should be developed with government intervention to assist tourism activity in the valley. This group can be made responsible for helping and protecting tourists on one hand and soliciting environmental friendly behaviors from the tourists.

7. Dense vegetation cover: All efforts should be made to check siltation of the Lake and to increase the quantity of water in the lake. Dense tree and shrub plantation on the public lands and social forestry should be undertaken in the entire catchment area of the lake.

8. Prohibition on littering and Segregation of municipal solid wastes: Littering of municipal solid waste should be prohibited in city. In order to encourage the citizens, municipal authority should organize awareness programs for segregation of wastes and should promote recycling or reuse of segregated materials.

9. Processing of municipal solid wastes: The biodegradable wastes should be processed by composting, vermicomposting, anaerobic digestion or any other
appropriate biological processing for stabilization of wastes. Land filling should be restricted to non-biodegradable inert waste and other waste that are not suitable either for recycling or for bio processing.

10. **Lake conservation:** Care should be taken that no waste disposal into the Lake takes place. All efforts should be made to check siltation of the Lake and to increase the quantity of water in the lake. Care should be taken that no waste disposal into the Lake takes place.

**References**

Environment Improvement Pushkar (1995) : A report by environmental planning division, town and country planning organization, ministry of urban affairs and employment, Govt. of India.


Sustainable Hotels Vis-À-Vis Destination Sustainability
Saurabh Kumar Dixit

ABSTRACT

Although tourism is an undeniable factor of economic development, it is also sometimes a threat to natural and cultural heritage because of the deterioration and even pillaging it inflicts. We should, therefore, find the means to achieve a common management of this heritage, harnessing the economic potential it entails to the best of our possibilities, while, at the same time, taking care of its integrity i.e. Sustainable Tourism Development.

Since the 1992 Rio Conference, the theme of “sustainable development” has continued to receive growing attention in all fields. In the study and practice of tourism, it soon became “sustainable tourism”, often as a synonym to the Rio theme. This popularity is evidenced by the large number of books and articles devoted to it since the Rio conference. Another gauge of this trend is the increasing number of tourism conferences totally or partly focusing on it, sometimes with a new thrust or focus. Present conference titled Hospitality & Environment: Issues and Challenges is also an effort in this direction. The hoteliers are now gradually acquiring the deep concern over the environmental issues during the development or expansion of any hospitality operation i.e. they are moving towards the sustainability in hospitality operations. The Ecotel Group is the hallmark of environmental friendly sensitive hotels. When one walks into an Ecotel Hotel, one is immediately struck by the environmental standards maintained by it. The use of eco-friendly materials is starkly evident from the interiors that are made from medium density fiber wood, manufactured from cotton stalks. Now almost every hotel in India is opting for the eco friendly practices to make the destination sustainable. The present paper is an effort to gauge the effort of the hospitality units of a destination in making it sustainable.

Key Words: Ecotel, Hospitality Products, Hospitality industry, Sustainability, Destination

Introduction

Hotels and resorts by the very nature of their role as providers of accommodation, recreation and food service on twenty-four hour basis and as being standing for comfort and high standard of living, consume significant amounts of natural resources, expel large amounts of waste which can be prevented and affect the sustainability of the natural environment of any destination. In this aspect environmental management should not be viewed as necessity not only because of greater public lobbying, not only because it is the law, not only because of potential positive financial benefits but also for the future of humanity. Previously environmental best practices are regarded as being impractical ideas, they are now viewed as important, attainable necessities by progressive companies. (Goosey, 2000)

There is hence a need for greener hotels that are at the heart of the tourism industry. Moreover, hotel guests are more conscious of environmental problems and have started to consider the environment in their accommodation choice. The development of eco-labels is thus helping tourists in their choice. Without cutting on clients’ comfort, many efforts can be made in the backstage by the hotel management industry through the application of best available practices and technological innovations. The environmental management practices of the hotel could affect staff, guests, business partners and local communities, at this point hotel have a great importance on achieving the environmental awareness in general. In order to achieve noticeable improvement, hotel managers and operators must be willing to act in an environmentally responsible manner. They also need to have adequate knowledge of the environmental issues pertinent to their activities, and sufficient funds to implement state-of-the-art environmentally sound practices (Bohdanowicz, 2006).

The hotel industry is now conscious of this new trend and has set policies in this respect. This paper is planned to have a review of strategies adopted by different hospitality units to conserve the nature and eco friendly operations. It fills the gap between commitments to

Dr. Saurabh Kumar Dixit, Assistant Professor, Institute of Tourism & Hotel Management, Bundelkhand University, Jhansi, U.P., INDIA, E-Mails: saurbh5sk@yahoo.com, saurabhdixitithm@gmail.com, Mobile: +919450069060
sustainable destination development and the undertaking of concrete measures. By suggesting eco-efficiency practices and providing easy-to-implement tools, the paper will enable hotel management professionals / owners to handle the environmental aspects related to hospitality business. Additionally, it involves hotel staff as key greening actors and provides a good basis for integrated environmental management systems.

In order to conserve local biodiversity while sustaining the tourism destinations, this new approach involving sustainable hospitality development must be implemented. To achieve this, the different components of the hospitality industry need to be integrated into a global strategy of environmental protection. Therefore, it is important to evaluate and assess impact of hotel / tourism industry on the environmental. This will be helpful in efficient water management in hotels which will significantly reduces the damage to the environment while simultaneously and substantially reducing costs.

Objectives

1. Integrating the nature / environment as one component of day-to-day hotel management
2. Recognizing significant and priority measures for hotels, enabling their implementation and ensuring sustainability over time
3. Promoting rational and eco-efficient use of resources
4. Offering hotels the opportunity to make the first step towards an integrated environmental management system

Review of Literature

Environmental Management in hotels started in the form of initiatives by various associations and activities which begun when the Prince of Wales launched the IHEI in 1992 (Mensah, 2006:415). In 1994, the Hotel and Catering Institute Management Association (HCIMA) participated in Green Globe, an environmental management awareness program initiated by the WTTC. The programme, “Green Globe”, has as its main objective, the aim to provide practical and low-cost means by which hospitality companies can demonstrate their commitment through a publicly recognized green globe logo (Kirk, 1995). In the same year, 16 hotel groups in the Asia Pacific Rim formed the Asia Pacific Hotels Environment Initiative (Chan and Lam, 2001). In 1997, The Caribbean Alliance for Sustainable Tourism (CAST) a nonprofit organization was established by members of the Caribbean Hotel Association (CHA) to promote responsible environmental and social management of natural and heritage resources respectively, within the hotel and tourism sector. (CAST, 2007)

ISO 14000, which has a series of international standards on environmental management emerged primarily as a result of GATT negotiations and the Rio Summit on the Environment held in 1992. After the rapid acceptance of ISO 9000, and the increase of environmental standards around the world, ISO, assessed the need for international environmental management standards. The introduction of the ISO 14001 Environmental Management System (EMS) standard had a significant impact on manufacturing and service industries in designing and implementing an EMS-based system to minimize the impact of their operations on the environment. Reasons for adopting the Standard range from compliance and consumer pressure to the potential for cost savings and a healthier environment (MacDonald, 2005: 631).
Research Methodology

The present work is based on the secondary information collected from the vivid resources concerning to the environment and hospitality sector and detonation sustainability. Thorough this paper the author also reviews the eco-efficiency measures adopted by the hotel industry operators of India in order to reduce their impact on the environment. The proper implementation of these measures constitutes the first step towards sustainability of the tourism destination. In order to now the best environmental practices adopted by the hotels a number of leading hotels management was also interrogated.

Concept of Best Environmental Practices in the Hotel Industry

Protection of environment, especially in a nature based tourism destination, is the key element in the sustainable tourism strategy. Notwithstanding the disagreement over a precise definition of sustainable tourism (Butler, 1991), the basic ideas and principles of sustainable development have been applied to tourism (Hunter and Green, 1995) and sustainable tourism has been broadly defined as, “tourism which is economically viable but does not destroy the resources on which the future of tourism will depend, notably the physical environment and the social fabric of the host community” (Swarbrooke, 1999:13). A review of literature also indicates (Erdogan and Baris, 2007; Mensah, 2005) that while large hotels (specially the international chains and star classified ones) are more likely to pay attention to the environmental protection to gain competitive edge, getting the small and medium enterprises (SMEs) to follow environmental protection programs is very difficult (Cummings, 1997; Kirk, 1998). Besides, having environmental concerns and following best environmental practices in day to day operations are two different things (Erdogan, 2003). It is thus important to study the best environmental practices followed by the hotels.

The use of the Best Environmental Practices (BEP) for hotels should be simple and practical. It should provide the means to identify, in the different departments of a hotel, opportunities for optimizing its activities while reducing its operating costs and its environmental impacts. The proposed measures should be exhaustive and voluntary. In addition, it should provide practical advice that can be adopted to suit the hotel’s context and expectations. To ensure adequate understanding and application of the concept, concrete examples should be provided throughout. These examples show a direct link between theory and practice. In brief, this aims at:

i. Rationalizing the use of raw materials, including water and energy
ii. Reducing the volume of wastes and improving waste management
iii. Adopting a more ecological purchasing policy and improving logistics
iv. Improving the quality of the hotel’s internal environment
v. Making the staff aware of the importance of environmental issues

In addition, the adoption of the BEP, principles can also act as a profitable marketing tool for the hotel. The hotel can improve its image in the perceptions of its stakeholders and guests, who are increasingly conscious of environmental protection. The BEP has six checklists and each checklist is dedicated to a specific environmental domain as under table -1.
Table -1 Environmental Domain Covered Under Best Environmental Practices (BEP)

<table>
<thead>
<tr>
<th>Domain</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>• To monitor water consumption and rationalize its use</td>
</tr>
<tr>
<td></td>
<td>• To save and protect local resources</td>
</tr>
<tr>
<td>Energy</td>
<td>• To control energy use and monitor its consumption</td>
</tr>
<tr>
<td></td>
<td>• To save energy and reduce atmospheric pollution</td>
</tr>
<tr>
<td>Wastes</td>
<td>• To reduce waste at the source and improve waste management</td>
</tr>
<tr>
<td></td>
<td>• To implement a recovery and recycling strategy</td>
</tr>
<tr>
<td>Purchasing policy</td>
<td>• To reduce the impact of consumption on the environment</td>
</tr>
<tr>
<td></td>
<td>• To promote the development of local, ecological and social product flows</td>
</tr>
<tr>
<td>Logistics</td>
<td>• To improve product handling and minimize losses and wastage</td>
</tr>
<tr>
<td></td>
<td>• To manage and master the hotel’s supply lines</td>
</tr>
<tr>
<td>Noise, air quality, and landscape integration</td>
<td>• To limit noise pollution</td>
</tr>
<tr>
<td></td>
<td>• To improve air quality inside buildings</td>
</tr>
<tr>
<td></td>
<td>• To reduce the impact on the local landscape</td>
</tr>
</tbody>
</table>

Source: Adapted from Karim Zein (2008)

Destination Sustainability

The Hospitality businesses need to prepare for conserving the natural heritage. Tourists have the money, knowledge, and time to adapt their behavior and they can switch travel plans to alternative destinations or seasons, or simply stay at home. But operators with large investments in fixed assets such as hotels, resort complexes, and casinos don’t have that same flexibility, and they have only a limited amount of influence on potential visitors. Their tactics should therefore be based on green and sustainable operations that will enable them to differentiate themselves from their competitors / appeal to environmentally aware tourists and to make the destination sustainable.

Looking at how best to do this, it is worth considering six Going Green areas, highlighted by the International Tourism Partnership, a program supported by the United Kingdom’s Prince of Wales Business Leaders’ Forum. The program suggests that hotels can improve a “triple bottom line” of economic, social, and environmental management by working on these six elements. After all, being “good” is also good for business.

(i) Policy and framework
Commitment of eco friendliness among all the operators in the destination, ideally underpinned by an environmental policy. A senior manager or executive should look after its implementation within the destination, heading a green team comprising a representative from different operators.

(ii) Staff awareness and training
No environmental policy will be successful unless staff understand the need for change and are committed to making it happen. Regular communications on how every employee can make a difference, as well as progress against targets, are essential in keeping staff engaged. An environmentally aware employer can also recruit green ambassadors who train colleagues to adopt green office strategies.

(iii) Energy Management
Energy management is a big-issue for hospitality operators to make the destination sustainable. It encompasses biodiversity protection, hygiene, safety, indoor air quality, water and power usage,
and waste management. With a typical occupied hotel room soaking up 218 gallons (825 liters) of water every day, good water management is high on the list and can make considerable savings. The installation of water-efficient fixtures in rooms has helped Fairmont Hotels cut its use of water by an average of 31 percent (Hotel News Resource, 2007b); Marriott Hotels has reduced spending by about 25 percent by opting for off-peak, cold-wash laundry (Kirby, 2007) and the Hilton Prague, in the Czech Republic, has installed an innovative hot water recovery system, which has reduced the energy needed to meet the domestic demand for hot water by 40 percent (International Tourism Partnership 2007b). Lighting is another key area that can be effective in helping hotels reduce their carbon footprint. In Australia, incandescent lights have been banned and hotels have switched to fluorescent lighting, which use less energy. Marriott estimates that its “Re-Lamp” campaign (Hotel News Resource, 2007a), which replaced 450,000 light bulbs with fluorescent lighting in 2006, saved 65 percent overall on guest rooms’ lighting costs. Additionally, replacing 4,500 outdoor signs with LED and fiber optic technology has yielded a 40 percent reduction in energy used for outdoor advertising. Starwood Hotels & Resorts estimate that changing the type of bulbs will cut energy used for lighting by 75 percent, which will save the company a considerable sum (Hotel News Resource, 2007e).

Some hotels—including the Willard InterContinental and the Fairmont Washington, both in Washington DC—are considering using alternative energy sources, such as wind power, to generate electricity. The French company, Accor Hotels, has become a green pioneer with its agreement with the country’s Agency for Environment and Energy Management (ADEME) (Hotel News Resource, 2007d). With ADEME’s backing, Accor intends to fit 100 new hotels with solar panels over the next three years. Already, ADEME has helped Accor install solar energy collectors to produce hot water in 24 hotels, as well as investing in a photovoltaic system for generating electricity in the Ibis, Porte de Clichy. Another excellent example of smart thinking is the eco-friendly air-conditioning system at the InterContinental Thalasso Spa Bora Bora, which opened in May 2006 and is accessible only by boat. The system is fed by a 2,400-meter pipeline, at a depth of 915 meters, off the Bora Bora reef. The pipe pumps extremely cold deep-sea water through a titanium heat exchanger, transferring it into a fresh water circuit that powers air-conditioning in the hotel. The system saves 90 percent of the hotel’s electricity consumption for air-conditioning, or 2.5 million liters of oil per year.

The three Rs—reduce, re-use, and recycle—are particularly relevant within the hospitality sector, given that the average restaurant produces 22,727 kilos of garbage a year. Every night, the average diner produces about 1 kilogram of waste, mostly composed of beverage and paper products, accounting for 65 percent of all hotel waste. It is estimated that 95 percent of this could be recycled or composted, but most is simply thrown away (Lee, 2007). One of the reasons for this volume of waste is that hotels built some years ago, just like our homes, are not equipped to have multiple garbage collection points so that paper, plastics, and glass can be segregated. Starwood Hotels & Resorts and InterContinental Hotel Group, however, are starting to encourage guests to recycle in the hotel as they would do at home, and are placing recycling bins in the guest bedrooms. Fairmont Hotels and Resorts are providing china, cutlery, and linen napkins rather than disposable items and paper napkins, and have placed recycling stations in all its meeting rooms, where whiteboards have replaced paper flip charts. At the corporate head offices of some hotel operators, central recycling points on each floor have replaced individual waste paper bins.
(iv) Purchasing

Choosing local, seasonal produce will help hotels cut delivery costs, which will make an especially dramatic impact. Fairmont Hotels has introduced eco-cuisine menus that feature local, seasonal, and organically grown foods wherever possible; and in the United Kingdom, London hotel—One Aldwych—is doing its bit to celebrate locally sourced, seasonal food. Its Taste Britain promotions have proved very popular, and illustrate that organic foods grown without chemicals are a healthy alternative that helps the environment. Both Hilton Hotel Group and Marriott International are being innovative in their choice of products to replace the ubiquitous Styrofoam cup. Hilton Garden Inns is replacing the 6.5 million nonrenewable Styrofoam cups it uses each year with the ecotainer™—an environmentally friendly coffee cup (Hotel News Resource 2007i).

The cup is the only all-natural, hot-beverage paper cup to be coated with a corn plastic. Making it requires less energy and produces less greenhouse gases, while its corn-based coating means it can be composted rather than sent to landfill. Marriott plans to eliminate the 20 tons of Styrofoam and plastic utensils it sends to landfill each year by replacing them with products made of potato (Spudware™), sugarcane, and cornstarch, which are all fully biodegradable within 100 days. Hilton Garden Inns is also introducing 100 percent biodegradable packaging for its soaps and shower caps in guest rooms, and using a soy-based, 100 percent biodegradable ink to print on the cartons (Hotel News Resource 2007i).

(v) People and communities

Hotels are often integral parts of the local community, with local people making up the bulk of the workforce. Supporting projects and initiatives in the area therefore makes a good deal of sense, both as an employer and as an advocate for environmentally friendly behavior. Accor too is helping to inform both guests and staff about energy conservation, with its practical guide that lists a few simple actions that everyone can take. The guide, in seven languages, is distributed throughout the Accor worldwide network of hotels. But the lead in this area is being taken by the environmental brand “1” hotel, which is being launched in 2008, by Starwood Capital. The company has pledged that 1 percent of revenue from each property will be donated to local environmental organizations (PR Newswire, 2007i).

(vi) Destination Protection

Since the natural beauty of many destinations is the reason tourists visit, it is essential that the hospitality industry does not disturb the flora and fauna while hotels are being built and resorts developed. The building of the InterContinental Thalasso Spa in Bora Bora, mentioned earlier, is a good example of eco-friendly development. All construction materials were shipped in at high tide to keep disturbance to the coral reef to a minimum. Across the world, there are many examples of hotels using furniture that is locally sourced and made by local craftsman—which is another way of preserving the status quo. Using local art also supports the indigenous culture.
Conclusions

There is no doubt that the issue of destination sustainability is one that faces everyone—not just the hospitality industry in India, but also it affects the hospitality industry of other developing & developed nations. At the micro level, many environmental initiatives cut the costs of running a business while lessening its impact on the planet. Looking after the laundry is a good example. Today, only 75 percent of hotel guests expect to have their towels and linen changed daily, and reduced washing loads need less water and detergent, as well as less energy to run the washing machines. Fewer staff will need to spend time in the laundry and, if room attendants don’t have to change the bed linen daily, they can provide service in more rooms. Green appliances may cost more initially, but good design makes them less expensive to run.

Environmental and social responsibility is becoming a core business strategy, which touches shareholders, consumers, retailers, suppliers, employees, and government and non government organizations, as well as scientific and academic institutions. Everyone engaged in tourism is anxious to see the industry grow and prosper. People’s desire to travel and to share new experiences is stronger than ever, but this has to be balanced with the need to protect the environment and reduce every traveler’s carbon footprint. While politicians debate the outcome of the UN summit and how best to match individual aspirations to see the world with the thorny issue of aviation emissions, the time is right for the hotel industry to make sure its own house is in order. By establishing best practices and a system of benchmarking that ensures a uniform approach, travelers will be able to sleep well at night— knowing that the hotel they are staying in has built a sustainable future.

In a few years, it is certain that environmental protection will become a legal obligation for hotels. Let’s be proactive and start from this moment on! Those who act first will be able to anticipate the law and will acquire a competitive advantage. It is time for the hotel industry to accept its environmental responsibilities to reduce the environmental impact of international tourism.

References:

CAST (2007), http://www.cha-cast.com/Whowear.html (04.03.07)


Referred parts from The Travel & Tourism Competitiveness Report (2008), World Economic Forum by Alex Kyriakidis & Julia Felton:

Hotel News Resource 2007d.
Hotel News Resource 2007e.
Hotel News Resource 2007i.
International Tourism Partnership 2007b.
Kirby 2007.
Lee 2007.
ABSTRACT
Leisure and Environment together is a challenge. Several studies (Gossling 2002; Gossling and Hall 2006b; Peeters et al.2006 as cited in Hall, 2008) have noted the rapid growth of Tourism as a contributor to emissions. (Scott, 2007a as cited in Hall, 2008) estimated that 5% of global share of Carbon Di Oxide emissions are attributable to Tourism within a range of 4-6%. Contribution towards reducing the impact on environment will be a great support to the cause for environmental protection. Current study was done to understand if the opportunity is being used by the hotel also and up to what level they think about environmental protection.

Climate has a number of direct and indirect influences on tourist decision making and destination attractiveness, tourism is a potentially sensitive economic sector with respect to climate change (Hall, 2008). This was a motive to get into a detailed analysis to find out the managements visions and policies, guidelines to employees, their understanding and seriousness about this grave matter including intention to evaluate the impact of eco-friendly practices on the customer retention, goodwill and direct and indirect impact of eco-friendly practices on the business and brand of the hotel.

In this research attempt was made to consider the impact of Eco friendly practices on stakeholder’s behavior. (Buckley, 2007) says not only direct impacts of climate change on park and beaches, water and wild life; but also the indirect impact on tourism as the social frameworks for access to these attractions change in response to changing climates. This research was conducted to enable us to find out the effect of “Greening” on the perception and acceptance by the guest and staff and its proportional impact on the guest’s decision in choosing and maintaining brand loyalty with the Hotel. Also to see if some seriousness is there in the approaches of hotels to adopt eco friendly practices.

Key Words: Hotel; Eco friendly Practices; Stakeholders behavior; growth; socio-eco benefits.

Introduction
The uneven climatic changes and growing environmental concerns are posing serious threats to the nations worldwide. Environment is the life line of all the living organisms without which the existence of living beings is impossible. It’s the sum total of all the natural climatic conditions which affects the growth and development of life. The alarming rate at which pollutants like toxins and hazardous wastes are being released in the natural surroundings, the rapid deforestation have all posed a serious threat to the survival of human beings.

With the world awakening to the threat of global warming, deforestation and endangerment of the plant and animal species, countries all over are adopting measures and technologies to ensure that a catastrophic situation is prevented.

In India, the realization of this approaching catastrophe has been understood and although rectification of the lost resources cannot be done, steps to avoid further exploitation of the Mother Nature are in full swing. The flourishing Tourism and Hotel Industry of India is in no ways lagging behind in joining hands towards contributing efforts in support to save the planet Earth!

Gagan Soni, Lecturer, BCIHMCT, New Delhi email: dev.gagan81@gmail.com
Poonam Anand, Lecturer, BCIHMCT, New Delhi email: poonam.himanshu.anand@gmail.com
Tangible benefits have been achieved not only towards the environment but also to the hotels that incorporate eco-practices in their establishments. With the growing awareness of today’s generation towards the endangering threat to our natural surroundings, more and more population is embracing “green lifestyle”. Demand for green practices is on the rise and hence the need for greening the hotel industry is felt by almost each and every hotel organization.

**Methodology**

The questionnaire was designed with a view to cover aspects ranging from Eco-Friendly practices followed in all areas and sphere of housekeeping of star rating hotels of all categories. Respondents were operation level people from senior level to junior level of the department. Range was from management support, operations, training, trends and practices, guest perception and behavior, Guest’s and staff’s acceptance and motivation, business opportunity and generation of goodwill to difficulties being faced during implementation of practices. Effort to evaluate the scope of the Eco Friendly practices in the Indian Hotel Industry was one of the approaches while designing of questionnaire.

Accommodation Management was the major department of focus to Study various trends and practices towards the eco-friendly practices as major services of this department are used and has greater role in the profitability and generates maximum revenue to the Hotel.

Questionnaire method has helped us in collecting information on the existing as well futuristic methods adopted by the hotels. Though the usage of eco-friendly practices is in its introductory phase, in our research we have tried to estimate the extent to which such practices can be improved and successfully implemented in near future.

**Literature Review**

Greening can bring forth opportunities to reduce environmental impact and improve sustainability as well as facility’s bottom-line (Thomas, 2009). Green hotels are environmentally friendly properties whose managers are eager to institute programme that save water, energy and reduce wastes, while saving money, to help protect our one and only earth! – Green hotels Association. More and more hotels today are turning to Ecotels by adopting green practices. Ecotels have comprehensive green cleaning programmes with clear performance goals (Zacharias, 2009).

There cannot be a trade-off at the cost of health and livelihood of the silent majority, as stated by (Singh, 2009). Development is the preferred option, provided the carrying capacity is available. More than 30% of the guests participate in the Energy saving programme offered by the hotel. An “Eco Button” is provided in the guest rooms, which upon pressing by the guest increases the air conditioning temperature gradually by 2%.(Zacharias, 2009).

Environmental friendly products in Guest Rooms ranging from recycled paper to herbal amenities are extensively used in The Orchid Hotel. Reusable cloth bags for laundry as well as
newspapers instead of standard paper or plastic bag offers a helping hand towards environment conservation. (Zacharias, 2009)

Green chemical certified products, which are cleaning agents based on natural products available in nature, like soybean, milk, citrus fruits etc are universally accepted standards for green chemicals which are gaining popularity these days (Mohana, 2009). Electrically charged water is also a powerful cleaning agent which acts as a good substitute for chemical cleaning agents and can replace many of today’s general purpose chemical cleaners (Schaeffer, 2009).

The Raintree Hotel, Chennai follows the basic principle of 3 R’s; Reduce (Wastage of any form including electricity), Recycle (Water, paper, food etc), Reuse (water, paper etc). Water taps are fitted with special aerators which increase the water force but reduce the outflow thus saving water by 50%. Waste water can be recycled, treated and reused for air conditioning and horticulture. (Nair, 2007) A new range of plastic buckets made entirely from recycled plastic are introduced as a step towards environment conservation. (Balathandayutham, 2009)

For the purpose of Waste Management separate segregation of “wet” and “dry” garbage is done in Hotel Rodas’s wherein wet garbage is screened and processed through pulverisers which converts it into a thick paste and removes water and oil from it. Burnt oil and fat is then given to scrap vendors along with dry garbage for recycling. (Clean India Journal, 2007)

Providing employees with information about their hotel’s green initiatives helps enhance pride in their properties and in the work they perform to keep their hotel healthy. (Sawchuk, 2007) Some of the Socio-Eco benefits are that the use of environmental preferable cleaning products has been proved to reduce staff absenteeism and improve employee morale which helps to enhance productivity. “There are groups and companies that try to do business only with businesses that are environmentally conscious” says Gerry Link. (Sawchuk, 2007)

In Aruba’s Bucuti Beach Resort, Caribbean, employee plays an important role in implementing sustainable and environmentally friendly practices from their first day on the job. Working with the maintenance department, green team representatives take part in quality control. The team documents consumption, system checks and supports the company culture throughout the resort. (Curley, 2010) One day Induction programme conducted for the new joiners wherein eco-friendly concept of the hotel is made clear to him/her. Special training programme is conducted by the Environment Officer once in three months. Special modules related to environment features are also followed. (Nair, 2007)

**Findings**

**Appreciation of the efforts by the Guest and enhanced goodwill**

In response to the benefit to the organization in the form of appreciation by the guest to Hotel’s efforts in implementing eco friendly practices 60% respondent accepted great deal of benefit. For them the source was guest feedback. Also, adopting these practices has enhanced the goodwill of the hotel, thus creating a niche for the hotel in the ever expanding hospitality world.
Performance Rate of Organizations Regarding Eco Friendly Practices

More than half responded that the rate of performance with respect to the current status of eco friendly practices being followed by the individual organizations for good, showing satisfactory progress in this area. (Fig. 1) Nearly 20 % responded that performance in this area is very good and 20% have responded as average.

Green rooms- Feel of Greens

The hotels have introduced several methods to give the guests a sense of participation in the drive to save nature. In order to reduce wastages the standard paper or plastic bags have been replaced with reusable cloth bags in almost 40% of the hotels. Also newspaper is delivered in cloth bags or reusable cane baskets.

“The major part of a hotel’s margin of profit comes from room sales, because a room once made can be sold over and over again.” The hotels have ensured that their guests get a “feel of green” throughout their stay and carry this green luxurious experience even after their departure from the hotel.

Another commonly seen eco-friendly amenity in the guest rooms was the stationery folder, menu card and coasters. The menu cards, brochures, stationary are made up of recycled paper that is bleached or unbleached using a chlorine free process. Eco-friendly pens, pencils and recycled paper used in notepads were also a part of environment friendly supplies. These pens are made up of recycled cardboard, reprocessed plastic and scrap wood. The eco-friendly pencils are made of non toxic polymer with natural fillers or neem.

A vivid usage of a wide array of neutral soaps and shampoos is the new trend of the green hotels. 85% of hotels have installed refillable dispensers for hair and skin products for the guests. Aromatic herbs like basil, rose, aloe vera, lavender are frequently used in the guest toiletries. Majority of the hotels are using exquisite herbal bathing products that are duly certified from established Ayurvedic schools. It has been observed that the left over bathroom supplies are either used in staff lockers or are given away to charitable institutions and NGO’s.
The ceramic containers used for cotton balls as well as the plastic sani-bins used in guest bathrooms have given way to stainless steel containers and bins in order to reduce the waste generated in the guest rooms.

**Cleaning Materials**

Cleaning agents and chemicals are infamous for their toxic nature thus causing harm to the environment. Therefore the eco-friendly hotels have paved a way towards non-toxic, neutral and biodegradable cleaning agents to minimize environment degradation. It is heartening to see that 84% of the hotels are using chemicals which are eco-friendly in nature.

**Reduce, Reuse and Recycle**

A systematic amalgamation and execution of the 3R’s can create a green revolution in the true sense and eco-friendly practices can revolve around the frame of 3R’s. 90% of the hotels have initiated the programme of linen and towel reuse in which worn out, damaged or badly stained linen is used as discard. These discarded room linen are also reused for making dusters and wiping cloth. Rags are used for one time metal or heavy cleaning. Discarded uniforms are given away to charities and NGO’s.

**Saving water for tomorrow**

Utmost care is taken with the usage of water in the guest rooms. It can be observed by some facts like the WC is fitted with specially designed cisterns that use minimum water to give a maximum output without deviating from the standards of the hotel, whereas some are fitted with automatic water operating sensors for the same purpose. The showerheads in some hotels have controlled water flow mechanized system to keep a tab on water usage. Majority of the hotels follow the practice of using recycled water from laundry in the WC for flushing. Cards are placed in the guest bathrooms giving a detailed statistics of the water usage during brushing, bathing etc, making the guest aware the importance of water and its wastage can thus be controlled.

Besides the guest rooms certain practices are also followed on the individual guest floors towards environment conservation. Tent cards stating “You can assist us in saving water and energy by cleaning your linen only once during your stay” are placed in the guest rooms which saves enormous quantity of water, detergents as well as energy. The maintenance department ensures constriction on the pressure of water flow on the floors as well as public area due to which less water is released after using the WC. This helps in restricted water usage and keeps a check on water wastage.

**Energy saved is energy generated**
It is a known fact that a hotel consumes a huge amount of energy for its day to day operations which increases the annual cost of the hotel in terms of budget as well as environmental hazards. Efficient usage of energy helps in solving this problem to some extent and is also beneficial to the hotel on a long term.

65% of the hotels have mentioned that they use energy saving electrical sockets as a means of energy conservation. The lights are dimmed in public areas during low traffic hours. One of the new eco-friendly trends followed by hotels is using Double glazed vacuum sealed windows which conserves energy and also helps in reducing external noise level.

Special guidelines for the conservation of energy are also issued by the management which is being practiced in almost all the eco-friendly hotels. Bulbs are being replaced by CFL lamps as a means of energy conservation. Automatic lighting shutoff system is used in the hotels wherein the lights in public areas as well as guest rooms are fitted with sensors and timers, so that after a particular time span lights gets switched off automatically in the absence of any person.

In some hotels during low occupancy in vacant rooms Air Conditioners are switched off so as to save energy, while in some AC system automatically turns to “low” mode when the guest room is not in use. Most of the hotels are constructed in a manner to facilitate maximum flow of sunlight into the guest rooms and public areas, so that usage of tube lights and bulbs can be avoided during daytime.

**Socio Eco- Benefit**

![Benefits to the Hotel by Following Eco Friendly Practices](image)

Fig 2 states the benefits hotels have achieved by introducing and following Eco-Friendly practices. Since the hotels have opted for more than one benefit the graph does not give a total percentage of 100%.

Nearly 20% respondent feel that eco-friendly practices are one of the most effective methods of cost saving, and also this gives rise to the volume of the hotel business or revenue. Going Green can become profitable as shown by two case studies, one involving ITC Grand Central, and the other Rhoda’s, hotels at two ends of the spectrum. Some of their practices and the kind of savings that they have managed to create by going green. May be this could prove conclusively that going green actually makes business sense.
Total savings per year  Rs 114961  
Total savings from April 2006 to Oct 2008 Rs 287402.5 (Hotel & Food Service Review, 2009)

Every successful hotel believes in exceeding guest expectations and thus creating a “WOW” at every moment for the guest. With the changing attitude of guests towards environment, 68% of the respondent believe that guests have given a positive response towards the commitment shown by the hotel towards nature and thus indirectly the health and well-being of the guests.

The innovative ideas and concepts of going green introduced by the management have involvement of 32% of their staff members and thus their success.

37% respondents believe that there is an increase in the goodwill of the hotel in the market owing to the numerous eco-friendly practices being followed in the hotel plus adhering to quality of services.

Managing the waste

The waste generated on the guest floors is also segregated into biodegradable and non biodegradable. Color coded bins and garbage bags are used for the same i.e. Green for biodegradable, White for Non Biodegradable and Black for glass and metal.

Training and Awareness

The success or failure of any new project largely depends upon the efforts of its employees. Many a time’s new techniques, processes or projects face failure not because of the lack of interest or efforts of the employees but due to improper training facilities for the employees.

To execute awareness amongst the employees in relation to eco-friendly practices, all the eco-friendly hotels have induced an extensive range of training modules for their employees incorporating topics like general environmental awareness, environmental policies, ISO 14001 awareness and Do’s and Don’ts to be followed in the hotel. These training sessions maybe conducted by the hotel’s own certified trainers or from other organizations as well covering the entire staff ranging from top management to the entry level employees also including contractors and suppliers. These training sessions are interactive sessions wherein all the employees are asked for their views and opinions in order to come up with new ideas and concepts.

Eco- Friendly Impact on Stakeholders

![Fig 3](image)

Policy discussion with respect to mitigating Climate Change, e.g. through the imposition of ‘Green
Taxes’ on aviation and/or Tourists, but even including appeals to avoid forms of holidays that impact on the climate system, clearly have implications for Tourism flows and tourist behavior (Hall, 2008). In this survey above 75% respondent feel that eco friendly hotel practices impacted customer behavior in a positive way towards the business. Out of which above 30 % feels that impact has given very good response where as above 35 % see response as good. (Fig. 3) Staff acceptance ranges from 50% as good to very good and 35% for average. Which, also reflect a fairly good level of acceptance of the Eco-Friendly practices by both the guest as well as the staff of the hotel.

**Main Findings and Conclusions**

Every hotel is putting in some efforts or the other for up keeping the biological balance. With Hotels resorting to ecological technologies to contribute towards saving environment, the Indian Hotel Industry has also adopted to become eco-conscious and join the noble cause of environment conservation as well as for creating a brand image of the hotel in the market.

A majority of the hotels in India are being environmentally responsible, yet continuing to deliver a high-class and premium guest experience high quality, non-intrusive eco-friendly services and products.

The findings of our research “Eco-Friendly practices in Housekeeping of Hotels in Delhi and NCR” can be summed up as

More and more hotels are turning green due to reasons like cost effectiveness as well as to add up to their goodwill in the existing market without compromising on their quality standards.

Positive Impact on Hotel’s image and goodwill is being seen after introducing these practices. Also Guest’s response is encouraging.

The management is inclined towards environmental preferable purchasing and to choose suppliers who follow the same line.

The guest rooms are one of the main focus areas where eco-friendly products are being extensively used.

Energy as well as water conservation practices are being laid emphasis on in the guest rooms as well as the public areas.

Management is also considering Sewage treatment plants and rain water harvesting as an effective way towards Environment Protection.

Water efficient laundry equipment along with cleaning chemicals that are neutral in nature and biodegradable is being given preference.

Training avenues with respect to environmental awareness and policies have been excavated by the management.

Extensive training programmes for the staff members are being developed so that each and every staff member of the hotel can contribute effectively.

Staff is responsive and extending support to the practices.
The hotels have incorporated several measures to reach out to the guests for their whole hearted participation and acceptance of such “Eco-friendly programme” in the hotel.

The Indian hotel industry is taking a major foothold in the fight to save environment. To strike off a balance between new eco-friendly trends and the constant need of standard up gradation to sustain the ever growing competition is not an easy task. But all these efforts could not have been successful without the patronizing acceptance by their valued guests and the effective contribution and participation by their trusted employees.

The level of Consciousness in the industry is greater than ever before. Even small hotels started understanding the need.

Hotels in Delhi- NCR have come up with the development and implementation of some practices or other which are adding up to the Eco Friendly Practices.

- Being green has several benefits to the hotel itself
- Going green personifies the image and thus the market value of the Hotel on a long-term basis thus attracting more number of guests.
- Improves management-employee relation as it embeds a sense of care and trust amongst the employees towards the management.
- Being Eco friendly is an effective cost-saving technique for the hotels.

Caring for the nature implies that the management of the hotel cares for the well being of their guests and thus assists in building a mutual relationship of trust and bonding between the guest and the management.

Although the green revolution is just in its onset period, with the level of initiative and zest seen by the Hotels in the various measures adopted towards greening, the day is not far away when we will proudly declare 100% contribution towards our “Green Hospitality…….”

References

Centre Stage, (2009), Go Green: Reduce Reuse and Recycle, Hotel and Food Service Review Vol. 23. Pp. 16-17
www.gocaribbean.about.com/od/beforeyougo/a/caribGreenHotels.htm
Sawchuk,M. (2007), Greening Hotels to Improve Occupancy and Sales, Clean India Journal, Volume 3(9). pp 28-29
Singh, A. (2009), (2009), Down To Earth, Rubber Stamp Authority, pp 29
Thomas, J. (2009), Going Green the Convention Way!, Clean India Journal, Volume 5 (6), pp 56
Whether Managing Environmental Degradation –
An Effective Tool for Increasing Economic Benefits of Tourism
S.Sundararaman

ABSTRACT
Tourism industry is becoming one of the most competitive industries of the world. This increased competition has forced service providers to find cost effective ways to retain clients and attract competitor’s client. In the modern business scenario where a cut throat competition exists to increase profits, knowingly or unknowingly lots of damages are done to the environment. Natural environmental resources are generally open access resources such as mountains, lakes, rivers, beaches, forests, deserts, etc. If primary tourism resources at a destination are degraded tourist inflow towards that particular destination will decline. Once if tourist inflow decline, it will become a tedious task for stakeholders involved in tourism business to generate profit. Market failure due to environmental degradation will create a complex situation as ways to mitigate losses are yet to be followed rigorously. It was increasingly accepted that rapid tourism growth will degrade the environment.

Apart from primary open access resources tourists require supporting resources such as transportation, accommodation, shops and various other facilities. These resources also pave way for physical changes, pollution, deforestation and climatic changes at that particular destination. The influx of tourists with a higher expectation, different lifestyle and with high disposable income also add pressure on environment as they require special types of services that disturb existing environment.

Combating environmental degradation is often viewed as a duty of none at many destinations especially in developing and in underdeveloped nations globally. Moreover, small private firms involved in tourism business consider practices to safeguard environment will increase the operational costs. People are largely interested in calculating socio-economic benefits of tourism rather than considering variables such as environmental degradation, affecting tourism at a particular destination.

This paper provides summary of the key findings demonstrating the relevance of managing environmental degradation to increase economic benefits of tourism further. It is against this background this paper was constructed with theoretical approaches to tourism impact on environment which will throw light on present condition of environment and also discuss how to manage it effectively and efficiently so that tourist arrival will not fall and economic benefits such as economic multiplier effects, employment opportunity for people of all segments at destinations, seasonal employment opportunity during peak season which is a means of additional income generating source for native community, investment from various agencies for promoting tourism industry will remain high.

**Key words:** Environmental degradation, Economic multiplier effect, Developing nations, Socio-economic condition, Open access resources

**Introduction:**

Environment is a central feature of the tourism industry at any destination. Tourism at a destination mainly depends upon climate, scenery, wildlife apart from culture and history. Rapid growth of such tourism industry has a negative impact on the environment. Advancement in science and technology not only increased inflow of visitor to a particular destination but also towards lesser known and remote destination globally. Operated professionally and marketed strategically no doubt tourism contributed handsomely to the income and economic development of the nation on the other hand devastated the environment. High volume of tourism traffic over the years multiplied the profit from tourism whereas the environmental resources the backbone of tourism at the destination remains unattended. During the last decade mass tourism added immense pressure on the existing environmental resources.

With passage of time greater awareness were created among people at destination as environment are tourism’s primary input base and degradation to environment threaten the future and existence of the people at the destination.

S.Sundararaman, Ph.D. Scholar, Dept of Tourism Studies, Pondicherry University
Excess environmental degradation due to inadequate tourism planning warranted a review of the situation particularly on environment of the destination. Various forms of tourism such as ecotourism, farm tourism, rural tourism, agri tourism, green tourism came into being which to some extent reduced the pressure on environment due to mass tourism. Though various forms of tourism are viewed as an opportunity to regain and reestablish the environment that was lost due to mass tourism still an approach for better conservation and preservation of environment is required.

Debate about tourism and environment is ongoing but the present state of affairs requires to be examined as the major challenge before tourism is how to manage the degrading environment effectively and effectively.

In absence of uniform methodology for managing environmental degradation a consistent approach towards efficient management of tourism environmental impacts has to be constructed and adopted. Though this cannot be uniform for all global destinations, destination or area specific approaches are required to be designed to mitigate negative impacts of tourism on environment at destinations. Based on the general premise that tourism causes a quantum of the overall environmental degradation this research was carried out. However this research does not attempt to quantify the exact amount of tourism’s share on environmental degradation.

Rationale of The Study:

Currently due to global environmental degradation almost all countries have undergone major changes. Moreover, degradation is still continuing in global scenario and environmentalist predicts that emerging economies like India will face a tight situation in days to come. No doubt, due to hard work and constant effort of various interested agencies and government, awareness regarding environmental degradation is created and people in large number are taking interest in protecting the environment. Though steps taken are contributing a lot towards upgrading the environment still a lot of base work is required to insulate the environment from degradation due to tourism activities at various destination. Such approach offers a useful analytical framework for managing environmental degradation effectively to increase the economic benefit of tourism. It is in this context present study assumes special significance and relevance. Certain vital issues have been tried to be identified and highlighted in this paper which may be of immense importance to policy makers, researches, academician and entrepreneurs engaged in tourism growth and development.

Objectives of The Study:
The main objective of the study is to

1. Identify challenges on Indian tourism industry due to environmental degradation.
2. Evaluate ways to overcome such challenges so that the losses to tourism sectors are avoided.

Data and Methodology:
For analyzing the various relevant issues of environmental degradation this study has used relevant available data and information. Data have been collected from secondary sources such as Ministry of Tourism, Government of India, India Tourism Statistics (2007), and unpublished dissertation, research papers published in various journals, books, reports and surveys and ideas of experts have largely contributed towards construction of this paper. Conceptual and
theoretical approaches to tourism impact on destination environment are widely adopted as methodology for this study.

**Impact of Tourism on Environment**

Tourism is one of the three leading categories of international trade along with gems, jewelry and IT. Tourism industry employs huge population either directly or indirectly in one of its sector like travel, hotel or accommodation.

Tourism industry creates job, attracts foreign exchanges, stimulate capital investment. It also encourages small industry, global economics and political linkages. Having such immense importance tourism is promoted to a large extent by all countries. This has created a lot of impact on environment.

The rapid global growth of tourism has led to a devastating impact on the environment. Growth creates problems, especially where fragile and remote environments are visited (Brian Goodall, 2006). Indian destinations faces a lot of problem due to tourism, as destination are not recently developed one moreover not understanding the importance of environment in tourism complicate the problem further.

Western countries are well aware of the impact of tourism on environment. Developed nations are fully prepared; they plan to develop tourism with less negative impact on environment. In simpler words they have increased the carrying capacity of each destination, by utilizing suitable methods which causes less harm to environment.

Thickly populated and developing economies like India has a lot of destination visited by more tourists but authorities pay very less attention towards the negative impact of tourism on the environment. A country like India which has a lot of natural destination has to understand the fact that environmental degradation will end in an irreparable loss for tourism sector. The impacts of Tourism on natural resources are as shown in table no.1

<table>
<thead>
<tr>
<th>Resources</th>
<th>Impacts of Tourism</th>
</tr>
</thead>
</table>
| On Water          | Over use of Water creates Scarcity  
|                   | Water sports creates pollution                                                   |
| On Soil           | Addition of more solid waste  
|                   | Degradation of fertility  
|                   | Excess use of fertilizer to produce more to cater the needs of tourists spoil composition |
| On Atmosphere     | Tourist vehicles movement creates pollution  
|                   | Aircrafts and vehicles creates sound pollution  
|                   | Fossil fuels release more toxic material in air at destinations                   |
| On Vegetation     | Reduction in cultivation area as lands are used for developing tourism infrastructure  
|                   | Pattern of cultivation changes  
|                   | Shrinkage of grazing lands at destinations  
|                   | Collection of rare Flora and Fauna by tourist endanger existence                  |
| On Forest         | Deforestation for developing Tourism Infrastructure  
|                   | Tourist movements in forest area create disturbances to Wild animals  
|                   | Forest fire due to irresponsible tourism                                          |
| On Beaches and Water Bodies | Overcrowding destroy beauty of Beaches  
|                   | Infrastructure for tourist at beaches creates visual pollution                    |
| On Other Resources| Create pressure on other resources like Food, Energy and Raw materials  
|                   | Increase in rates of local commodities  
|                   | Socio-cultural degradation at the destination                                      |

*Source: Sundararaman.S. (2001)*
Increased Tourism Activities and Its Impact On Environment

International tourists and domestic tourist movements has increased beyond imagination added much pressure on existing infrastructure resulting in physical changes on environment in the destination apart from expansion of already available infrastructure. Total number of hotels and rooms in India as shown in table no 2 indicate the rapid expansion of tourism infrastructure over a period of time. Increase in demand for non-indigenous services disturb exiting economic systems, but also destroy traditional values and cultures (D.G. Pearce, 1989). To satisfy needs of high budget tourist, tourism firms generally treat environment as free resources and over exploit them to maximum possible extent. In tourism business environment is often viewed as non priced amenity.

Table No. 2: Number of Hotels and Rooms

<table>
<thead>
<tr>
<th>Category</th>
<th>No. of Hotels</th>
<th>No. of Rooms</th>
</tr>
</thead>
<tbody>
<tr>
<td>One star</td>
<td>53</td>
<td>1774</td>
</tr>
<tr>
<td>Two star</td>
<td>231</td>
<td>6637</td>
</tr>
<tr>
<td>Three star</td>
<td>587</td>
<td>24496</td>
</tr>
<tr>
<td>Four star</td>
<td>116</td>
<td>7584</td>
</tr>
<tr>
<td>Five star</td>
<td>81</td>
<td>9792</td>
</tr>
<tr>
<td>Five star deluxe</td>
<td>93</td>
<td>20110</td>
</tr>
<tr>
<td>Apartment Hotel</td>
<td>5</td>
<td>461</td>
</tr>
<tr>
<td>Time Share Resort</td>
<td>1</td>
<td>62</td>
</tr>
<tr>
<td>Heritage hotels</td>
<td>83</td>
<td>2450</td>
</tr>
<tr>
<td>Unclassified</td>
<td>175</td>
<td>10415</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1425</strong></td>
<td><strong>83781</strong></td>
</tr>
</tbody>
</table>

Source: India Tourism Statistics (2007), Ministry of Tourism.

At a destination if tourist spends certain amount for example say A, the tourist has the right to expect satisfaction for example say S. Taking amount spend in X axis and expected level of satisfaction in Y axis and joining A and S we get the following figure no.1 Now consider AS as required tourism infrastructure. (Here the medium which help either directly or indirectly in converting tourist expenditure into tourist satisfaction is taken as tourism infrastructure)

Fig.1: Relation between Tourist Expenditure, Satisfaction and Infrastructure
With advancement in science and technology, economic development tourist has more disposable income which tourists are ready to spend to achieve more satisfaction at the same destination. So the amount will move from $A$ to $A'$ and in same manner expected satisfaction level will move from $S$ to $S'$ connecting $A'$ $S'$ we will get the following figure no 2. Now $A'$ $S'$ is the new tourism infrastructure required at that particular destination.

**Fig.2: Relation between Increased Tourist Expenditure, Expected Satisfaction and Required Infrastructure**

From the figures No.1 & 2 it is very clear when tourist are willing to pay more for achieving more satisfaction they need for more or enhanced tourism infrastructure. It will increase creating a need for building new tourism infrastructure apart from the existing ones. Planning and promotions of tourism when done without caring for environmental degradation will hamper the growth of tourism in the long run. If tourism activities are not managed surely it will harm the destination environment and it will create irreparable loss to the tourism sector itself. Increased economic benefits due to tourism related product/services will subsequently lead to expansion of tourism infrastructure at any destination globally.

Tourism is often seen as having great potential in developing countries which have substantial natural resources to attract tourists (Bird, 1992). Country like India where each and every inch is filled with scenic beauty has a lot of tourism potential and the growth rate are shown in the table no.3 establishes the fact that tourist inflow towards this land keeps increasing expect in few years due to unavoidable reasons. Destination success largely depends upon satisfaction of the visitor. Tourism is a highly visible phenomenon where tourists expect good infrastructure, better amenities and best services (Chaudhary, 1996: Chaudhary, 2000). In such situation where cut throat competition exist destination can remain attractive if necessary infrastructure are available to satisfy all need of the visitor. When increased infrastructures are required it becomes duty of all stakeholders at that particular destination to ensure that environmental degradation is minimized due to effective and efficient tourism planning.
Table No.3
Domestic Tourist Visits, Foreign Tourist Arrivals and Percentage Change (1996 - 2009)

<table>
<thead>
<tr>
<th>YEAR</th>
<th>No. of Domestic Tourist Visits (in millions)</th>
<th>Percentage Change Over the Previous Year</th>
<th>Foreign Tourist Arrivals (in millions)</th>
<th>Percentage Change Over the Previous Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>140.12</td>
<td>2.5</td>
<td>2.29</td>
<td>7.7</td>
</tr>
<tr>
<td>1997</td>
<td>159.88</td>
<td>14.1</td>
<td>2.37</td>
<td>3.8</td>
</tr>
<tr>
<td>1998</td>
<td>168.20</td>
<td>5.2</td>
<td>2.36</td>
<td>-0.7</td>
</tr>
<tr>
<td>1999</td>
<td>190.67</td>
<td>13.4</td>
<td>2.48</td>
<td>5.2</td>
</tr>
<tr>
<td>2000</td>
<td>220.11</td>
<td>15.4</td>
<td>2.65</td>
<td>6.7</td>
</tr>
<tr>
<td>2001</td>
<td>236.47</td>
<td>7.4</td>
<td>2.54</td>
<td>-4.2</td>
</tr>
<tr>
<td>2002</td>
<td>269.60</td>
<td>14.0</td>
<td>2.38</td>
<td>-6.0</td>
</tr>
<tr>
<td>2003</td>
<td>209.04</td>
<td>14.6</td>
<td>2.73</td>
<td>14.3</td>
</tr>
<tr>
<td>2004</td>
<td>366.27</td>
<td>18.5</td>
<td>3.46</td>
<td>26.8</td>
</tr>
<tr>
<td>2005</td>
<td>391.95</td>
<td>7.0</td>
<td>3.92</td>
<td>13.3</td>
</tr>
<tr>
<td>2006</td>
<td>462.31</td>
<td>18.0</td>
<td>4.45</td>
<td>13.5</td>
</tr>
<tr>
<td>2007</td>
<td>526.56</td>
<td>13.9</td>
<td>5.08</td>
<td>14.3</td>
</tr>
<tr>
<td>2008 (P)</td>
<td>562.92 (P)</td>
<td>6.9</td>
<td>5.37(P)</td>
<td>5.6</td>
</tr>
<tr>
<td>2009</td>
<td>N/A</td>
<td>N/A</td>
<td>2.47(P)</td>
<td>-9.3@</td>
</tr>
</tbody>
</table>

(P) Provisional  
N/A Not Available  
@ Growth Rate over Jan- June, 2008  
Source: Complied Data from www.incredibleindia.org

Recommendations for the Improvement of Environment at Tourism Destinations

Tourism today is world’s most dynamic and diversified socio economic activity. India has a lot of beautiful tourist destination which can attract a lot of foreign exchange if the environment of destination is improved. Environmental quality management can improve the competitiveness of a destination (Mahalie, 2000) clearly implies the need for managing the environment when heavy competition exist between destinations to attract tourist. Any losses due to environmental degradation must be viewed seriously as it may affect the tourism development at that particular destination. Government along with people and Non-Governmental organisation should take preventive measure to ensure that environment is protected at any cost. Following cost effective ways can be adopted:

(a) Creating Awareness  
Increased environmental awareness provides a rationale to stay in business and gain competitive advantages through innovative behaviour (Hjalager, 1996) indicate clearly that policy makers must pay due attention in creating awareness especially among local people at various tourism destinations.

(i) Most important way to protect environment is to create awareness among the people of all class throughout India. Lack of knowledge about tourism potential has to be removed from the mind through proper education about tourism.

(ii) Institution offering studies about environment protection has to be improved a lot in India. Studies on environment have to be encouraged among the students at all levels.
(b) Minimising needs
(i) Human depends on nature for better living. Greedy human activities like uprooting trees causes’ serious damage to environment. Human needs have to be reduced to large extent by suitably replacing those items with other materials which will not hamper the environment.
(ii) Rules and regulation has to be made strict. Persons causing damage to environment has to be dealt with heavy hand.

(c) Effective Transportation
Transport sector is regarded as “back bone of tourism”. Hectic tourist activities take place because of improvement made in transport sector.
(i) Transportation cause heavy damage to environment. So transportation facility existing at destination has to be utilised to maximum extent rather than adding volume further.
(ii) In all major cities lack of efficient mass transportation system resulted in increase of sale of motor vehicles. This creates a lot of pollution. Effective public transportation has to be introduced in every city to maximum extent. Use of diesel motor vehicle has to be avoided especially in the hill station, forest area and in beaches.
(iii) Use of electric cars, cable cars has to be introduced and used in hilly area so that the environment is least affected. Use of electric car and cable car gives more comfort and cause less pollution.

(d) Reducing use of toxic materials
Addition of toxic materials for cost effective tourism services at destinations cause of lots of damage to environment at a destination.
(i) Use of toxic materials such as rubber, artificial dies and various chemicals causes a serious threat to the environment.
(ii) Increase of tax for use of such items especially at tourism destination will surely mitigate the environmental degradation at tourism destinations.

(e) Use of renewable source of energy
Use of non renewable source of energy causes a lot of damage to environment.
(i) Renewable source of energy like solar energy has to be utilised for cooking, heating, pumping water must to be introduced and must be made compulsory at all tourism infrastructure.
(ii) Wind energy used for generating the electricity reduces a lot of pressure on environment must be introduced at all possible destination.
(iii) Usage of bio gases to cook food helps in maintaining cleanliness at destinations and is cost-effective this must be encouraged.

(f) Ban on use of plastic
Use of plastic bags, bottles, cans has become popular as they are of less cost and comfortable to carry but cause a great burden on environment that too in country like India.
(i) Plastic remain as a great burden on environment as it take long time for decomposing it create lot of soil pollution.
(ii) Tourist finds it comfortable to use plastic bag this practice has to be discouraged by suitably encouraging them to avoid using polythene bags.
(iii) Zute, paper, cloth bags can be offered to tourist on rent basis so that they can find it more comfortable, this will result in less pollution at that area.
(g) **Tourism a tool to conserve not to consume**

Tourism provides countries with a return for their natural resources (Boo, 1990). Tourism at any destination brings a lot of foreign exchange such countries should take tourism as a tool to safeguard its environment and try to maintain the profit level by maintaining its environment without any compromise.

(i) By providing an alternate method of tourism a lot of pressure on ecology can be reduced.

(ii) Tourism benefits have to be calculated not only on economics basis but also on ecology and environmental basis.

(iv) Development in harmony with environment has to be the spirit of our plan.

(v) Tourism should be a process that conserve and not to consume environment

(vi) Development has to explore relation between the natural resources and visitors, with special regard to its conservation through sensitive planning and management.

(vii) Tourism can have positive effect upon physical and psychological environment of the destination.

Many established tourism businesses may be operating in an environmentally inefficient, even polluting, manner (Brian Goodall, 2006). To avoid such situation operating firms must ensure they operate in eco-friendly manner. Environmental auditing for sustainable development has to be carried out from time to time to ensure that environment is not degraded. Various Government departments, law enforcing agencies, NGO’s opinion has to obtained before designing policies. All the above mentioned ways if followed will help a lot in preventing environment degradation at tourism destination. Small tourism related businesses operating at various destinations must be made aware of benefits of the environment towards tourism development at that particular destination. Innovative approaches must be combined with traditional methods of protecting the environment at all destinations and much care must be adopted to ensure native people views must be followed to a maximum extent especially to encourage them in safeguarding their own environment which will directly contribute to native people participation in development of tourism at all destinations.

**Conclusion**

The theoretical and empirical contributions to tourism research especially on environmental impacts have come from many disciplines and also have contributed to knowledge of effective management of environment. Holidays are still sold largely on the basis of destination, value for money, excitement and quality rather than on environmental sustainability (Brian Goodall, 2006). This particular aspect found in selling holidays can be changed only when stakeholders understand the potential of environment in creating profit to tourism at a particular destination. Environment being the most vital part of tourism at any given destination globally, utmost care has to be adopted by all. Removing negative environmental impact initiated by tourism is the need of the hour rather than understanding environment as reason for attracting tourists towards particular destinations. Environmental quality will soon become the benchmark in helping tourist to take decision in favour of that particular destination. The situation will become more difficult if due care is not provided to the environment right now. Making the stakeholders to understand that investment for environmental protection will directly bring benefits in form of more tourist arrival and will help in further growth of tourism at any destination is the main duty of the researchers in current situation. Tourism stakeholders must accept the
responsibility and must create awareness among all to make tourism business as a tool to preserve rather than degrading the environment at all destinations.

References
Ibid. p.196.
Ibid p. 218.
Chaudhary, Manjula (1996), India’s Tourism: A Paradoxical Product, Tourism Management Vol.17. (8).
Mass Tourist Arrivals and Its Impact on Ooty’s Natural Environment
R.Narasimmaraj

ABSTRACT

Majority of tourism takes place in mass tourism at mountain tourism destinations globally. Ooty famously known as ‘Queens of Hill Stations’ in Tamil Nadu is not exempted from environmental degradation due to tourist arrival in large number during various season. Due to this a lot of pressure is added constantly on its environment every year, turning it as one of the mass tourism destination in recent years. Mass tourism implies the participation of large number of people in tourism who avail a standardized holiday which is largely packaged and inflexible. Moreover, a lot of people settle here every year as tourism provide a lot of employment opportunity to people of all segments rich or poor, educated or uneducated adding considerable strain on existing environment of Ooty. This particular point cannot be neglected while calculating ill effects of mass tourism at any destination. Destination specific approaches is vital for mitigating the negative impact of mass tourism is the need of the hour, rather than generalizing and adopting the same steps used to upgrade the environment at other destination. Tourism is diverse phenomenon that a single social principle is not enough to explain it what tourist wants, to find what is genuine, pure, and superior in the universe. In search for such authenticity knowingly or unknowingly mass tourism which came into existence creates a lot of damages to the nature which is against the sustainable tourism principles. This paper makes an effort to evaluate the factors influencing mass tourism at Ooty and also suggest ways to mitigate the negative impact of mass tourism.

Key words: Mass tourism, Sustainability, degradation, carrying capacity, ecological impact.

Introduction

Tourism is one of the fastest growing industries in the world. Within the tourism industry, mass tourism plays a pivotal role in the development of tourism. The affirmative side of the mass tourism growth at any destination induces economic multiplier effect, employment opportunities, local and regional developments. On the other hand, the negative side of the mass tourism creates several destructive impacts on the destination such as deforestation, soil erosion, Carbon emission, overcrowding, visitor’s dissatisfaction, and cultural degradation.

Ooty has been identified by researchers as one of the most significant tourism destinations in the South India for its exceptional biodiversity features. It is one of the embraces of civilisation with a rich natural and cultural heritage. The Queen of Hill Stations is the region with the highest percentage of endemic species - species living in this region. Rich in plant diversity, about 3,300 species of flowering plants are available here. The fauna of the Nilgiri Biosphere Reserve includes over 100 species of mammals, 350 species of birds, 80 species of reptiles and amphibians, 300 species of butterflies and innumerable invertebrates. Fishes, amphibians and reptiles endemic to the Western Ghats also occur in the Nilgiri Biosphere Reserve (www.india9.com).

Tourism is the largest industry in the world with impacts to match. Because tourism occurs in environmentally fragile areas rich in biodiversity, its impact on the environment is significant. Nowhere in the world is this more evident than the Ooty in South India. In fact, large-scale mass tourism is one of the main forces behind the ecological loss and destruction in the region, particularly in mountain environment that still maintain high natural value and are important to safeguard biodiversity. Through inappropriate practice and development, once pristine locations have been damaged, sometimes beyond repair. The present study measures the impact of mass tourist arrivals and its impacts on natural environment at Ooty.

R.Narasimmaraj, Research Fellow, Department of Tourism Studies, (School of Management), Pondicherry University, Puducherry, India, Email: narasimmarajj@gmail.com, Ph: +91- 944233 6443
Tourism is one of the largest and fastest growing industries in the world. It is an increasingly important source of income, employment and wealth in many countries. International tourism now accounts for a larger share of foreign exchange receipts and export earnings than any other industry in the world. But, while tourism provides considerable economic benefits for many countries, regions and communities, its rapid expansion has also had detrimental environmental and socio-cultural impacts. Natural resource depletion and environmental degradation associated with tourism are often serious problems in tourism-rich regions. When there is a tourism development in a destination that gives negative impact on social, economic, cultural and environmental is unavoidable Valentine (1992). There is some concern over the tourism development that may lead to destinations losing their cultural identity by catering for the perceived needs of tourists – particularly from regional and local market. Gawler Visitors Centre (Fact sheet) views that many of the fears surrounding tourism spots are closely associated with uncontrolled, unsustainable and massed tourism growth. Tourism is an industry and is dominated by private enterprise with a purpose of making money by selling experiences. Market led planning can fail to achieve the objectives of sustainable tourism and has a tendency to forget environmental, social and cultural impacts. Like all industries, impacts do occur, but the extent to which impacts are negative can be minimised. Frederico Neto (2002) views that natural resource depletion and environmental degradation associated with tourism activities are sometimes serious problems in tourism-rich regions. The management of natural resources to reverse this trend is thus one of the most difficult challenges for authorities at different levels. Further he states that many tourists chose to maintain their relatively high patterns of consumption (and waste generation) when they reach their destinations can be a particularly serious problem for developing countries and regions without the appropriate means for protecting their natural resources and local ecosystems from the pressures of mass tourism. Frederico Neto. (2002) classifies that four types’ environmental impacts of tourism are
(a) Pressure on natural resources
(b) Pollution
(c) Waste generation and
(d) Damage to ecosystems.

Furthermore, it is now widely recognized that not only uncontrolled tourism expansion is likely to lead to environmental degradation, but also that environmental degradation, in turn, poses a serious threat to tourism. World Tourism Organisation estimates that growth of mass tourism development in the world will continue to damage landscapes, cause soil erosion, put pressure on endangered species, further strain available water resources, increase wastes, pollution discharges, land and landscape, Species, Freshwater, Pollution, and wastes, Social and cultural impacts. Furthermore, by 2020, approximately 350 million tourist arrivals will visit the Mediterranean, representing about 22% of all tourists world-wide. The ten Balkan countries are forecast to receive 79 million tourists in the year 2020 (4.6 % growth rate over period 1995-2020). The leading tourist destinations will be Greece, Turkey, and Croatia. Under the current tourism development patterns, these trends imply the degradation and even the outright destruction of most of the still valuable natural and cultural areas of the region. Dutt and Singh (1992) have identified the negative impact of growing mass tourism on the natural environment, has mentioned that there are plenty of cases in the Himalayan region where economic benefits of the tourism cause destruction of natural resource in the name of better accessibility, construction
of hotels, the use of firewood for heating purposes in hotels, solid waste accumulation, destruction of wildlife, etc. Frederico Neto (2002) studied about Sustainable Tourism, argues that the natural resources such as energy, food and basic raw materials – the main natural resources are at risk from tourism development are land, freshwater and marine resources. Without careful land-use planning, for instance, rapid tourism development can intensify competition for land resources with other uses and lead to rising land prices and increased pressure to build on agricultural land. Intensive tourism development can also threaten natural landscapes, notably though deforestation, loss of wetlands and soil erosion. Tourism development in coastal areas and mountain areas – including hotel, airport and road construction – is a matter for increasing concern worldwide as it can lead to mining, beach erosion and land degradation. Seminar on Planning for Development with Conservation in Hill Area/Station a Case Study of the Nilgiris (2005) the summary of the seminar report depicts that “Approximately around 2.5 million tourist’s visit to Nilgiris district, particularly [Ooty], despite tourism being seasonal and location. But there is no clear tourism plan as how to manage or benefit this huge in flow… the day visitors is often seeking amusement alone they never care about how to contributes little to the local economy. Moreover, the day visitors are the major polluter because of the more number of the vehicles comes up the hills. Finally the seminar suggests that tourism facilities available in hills must be restricted to those conforming to ecotourism and discerning eco-tourist. All other types of tourism [mass tourism] must be located away from the hills. Mohamed (2005) pointed out mass tourism arrivals disturbs environment. Ooty attracts more than 1, 00,000 tourists during peak season and an average 15,000 visitors per day even in the off season. Due to mass tourist arrival the originality of the destination has been diminishing every day the further they suggest that following points to control and regulating measures as follows; controlled urban and rural development is essential towards southern part of the Ooty. Infrastructure planning “Need based infrastructure planning” for urban and rural areas more particularly in tourist based urban settlement it could be need based both in terms of local people and tourist needs (domestic and international). Tourism based Urban Development should improve tourism potentials without damaging environment quality. There is Capacity and Environment Sustainable Development. These are the several points he has in sited in this research findings. All these above studies measure the mass tourism and its impacts on the natural environment. The overall long term success of mass tourism depends on how well natural resources like forest, wildlife, etc, should be effectively managed. Although, Ooty is in the very crucial stage due to excess mass tourist arrivals. Hence, it is very difficult to estimate the environmental damage due to mass tourism activities in the Ooty. The measuring the mass tourism it not an easy task because till today there is no proper tool for measuring it. But calculating the physical carrying capacity model identified by Maldonado et al 1992 is employed in this study. All above reviews revels that mass tourism will no longer suites for destinations like Ooty. Moreover, the impact of the mass tourism has to be replaced with the help of alternative forms of tourism such ecotourism, nature-based tourism and sustainable tourism is the need of the hour. Then only Ooty shall remain as ‘Queen of Hill Stations’ forever in future.

Site Profile:

This study was carried out in Ooty especially at three specific areas namely (Botanical Garden, Rose Garden and Boat House) which are well known destination having potential to attract tourist towards them.
Rationale of the Study

Geological Survey of India (GSI, 1978) … views that “The stage of preventing environmental degradation in Nilgiri district [Ooty] has been crossed over. The harm has been done. The present stage is one of repairing the damage.” … as far as the GSI report, Ooty’s natural environmental should be preserve for future generation in a sustainable manner. As a result of it, this study tries to reveal the present condition of natural environment degradation at selected three destinations at Ooty and possible measure to manage the degradation from the mass tourism perspective. The scope of the study is to analyze the growth of mass tourism in these spots namely Botanical Garden, Rose Garden and Boat House. Basically, these three destinations have more tourist arrival than other destination (Namasivayam and Aubuselvam. 2003). Hence, the need of the hour is to mitigate the negative impact of mass tourism further spreading in these destinations. Wide range of data is required for calculating effective and real carrying capacity. For the easy understanding of all stakeholders and to enable personnel at the grass root level involved in tourism business to understand, this paper deals only with the calculation of physical carrying capacity.

Objective of the Study

Objectives of the study intend to:

a) measure the tourist arrival to three selected destinations Botanical Garden, Rose Garden and Boat House at Ooty
b) calculate the physical carrying capacity limit on three destinations.
c) examine the impact of mass tourist arrival at the three destination
d) suggest the conservation and preserving methods for safeguarding the three destination natural environment

Data Sources and Methodology

The tourist arrival data of three selected destinations were collected from Tamil Nadu Tourism Development Corporation, Botanical Garden, Rose Garden and Boat House authorities. Further, relevant review of literature was collected from the various research publications, books, published reports.

Simple percentage method was adopted to find the growth rate of tourist arrivals to selected three destinations in Ooty.

Formula of Simple percentage method;

\[
\text{Tourist arrival Growth rate} = \frac{\text{Previous year tourist arrival}}{\text{Current year tourist arrival}} \times 100
\]

Carrying capacity method was also applied to find out the excess tourist arrivals (mass tourist) in these three destinations. According to these method three types of carrying capacity, namely, physical, real and effective carrying capacity exists in general. The formula for calculating carrying capacity is given below; only physical carrying capacity at the above three tourist sites is discussed in this study. Due to lack of availability of required data this study mainly focused physical carrying capacity.

Formula: \( PCC = \text{length} \times \text{visitors/ metre} \times \text{daily duration (hours} / \text{day)} \)
“Physical carrying capacity here is calculated assuming that to move freely in a specified time individual requires 1 square meter, width of the trails (path) is 1 meter. This indicates 1 linear meter of the trail is required at any given moment for that individual to move freely. Relevant assumptions made are as per (Maldonado et al 1992).”

The following situation is considered for calculating physical carrying capacity

- a) visitors follows the trails in group of not more than 25 (each group with a guide);
- b) a distance of at least 100 meters is maintained between group;
- c) the tail (path) has length of 1,100 meters;
- d) an average time of 1 hour is required for a visitor;
- e) the destinations and trail are open to the public for 7 hours in a day for 360 days in a year

Considering the above, physical carrying capacity at the three spots namely, Botanical Garden, Rose Garden and Boat House were calculated using the above mentioned formula. To clearly specify that these spots receive excess tourist arrivals every year the growth percentage was calculated using the formula as shown for the period of 9 years since 2000 to 2008. Percentage of growth is as shown below in table No.1

**Formula of Simple percentage method;**

\[ \text{Tourist arrival Growth rate} = \frac{\text{previous year tourist arrival}}{\text{current year tourist arrival}} \times 100 \]

**Table No.1: Growth Percentage of Tourist Arrival Botanical Garden, Rose Garden and Boat House**

<table>
<thead>
<tr>
<th>Year</th>
<th>Growth Percentage of Tourist Arrival at</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B G in (%)</td>
</tr>
<tr>
<td>2000</td>
<td>79.22</td>
</tr>
<tr>
<td>2001</td>
<td>80.48</td>
</tr>
<tr>
<td>2002</td>
<td>79.52</td>
</tr>
<tr>
<td>2003</td>
<td>85.10</td>
</tr>
<tr>
<td>2004</td>
<td>160.08</td>
</tr>
<tr>
<td>2005</td>
<td>128.79</td>
</tr>
<tr>
<td>2006</td>
<td>151.72</td>
</tr>
<tr>
<td>2007</td>
<td>164.36</td>
</tr>
<tr>
<td>2008</td>
<td>193.64</td>
</tr>
</tbody>
</table>

Source: Compiled from Tamil Nadu Tourism Development Corporation, Botanical Garden and Rose Garden (2008).

BG Botanical Garden
RG Rose Garden
BH Boat House
N/A Data not available
Analysis and interpretation of the Study

Botanical Garden is one of the best tourist spots which attract the tourist from all over the world. This garden was laid out in 1847 by the Marquis of Tweed ale and is spread over 22 hectares ascending the slopes on the hill at an elevation of 2,400 meters above Main Sea Level. An explicit collection of flowering trees, beautiful shrubs, and rare colored lilies are seen.

The growth percentage of tourist arrivals to Botanical Garden depicts that Botanical Garden has attracted visitors to maximum extent at Ooty. Massive increase in arrivals created overall degradation at the spot. Perpendicular growth was witnessed due to good infrastructure, easy accessibility, proper maintenance and varieties of flora and fauna. In 2005 as a result of drought in this region this spot received less tourist and many floras were not able to survive the change in climate.

Rose Garden is situated in the heart of Ooty town and it is laid on 10 acres of land. This garden has been beautifully laid out in terraces with rose tunnels, pergolas and bowers with rose creepers. Today this garden has the largest collections of roses in the country, around 3600 varieties of roses like Hybrid Tea Roses, miniature rose, Floribunda, Ramblers, roses of unusual colors like black, green and many more varieties of roses that will captivate your senses. This garden is maintained by Tamil Nadu Horticulture Department. It has also received the as "Garden of Excellence" by the World Federation of Rose Societies (WFRS) in 2006. So far, only 15 rose gardens in different parts of the world have been awarded the 'garden of excellence' certificates and presented with plaques

The growth percentage of tourist arrivals to the Rose Garden shows there is an increasing trend in the tourist arrivals. Except in 2005 the trend of growth was impressive. The drought played havoc in tourist arrivals to Rose Garden as a result less tourist arrival was found in that particular year.

Ooty lake is situated just behind of the central Bus Stand (also near the Railway station) the famous Ooty Lake stretches, in an irregular 'L' shape, for about 2.75 Kms in length and varying distances in width(100m – 140m). For the curious, this lake was artificially formed by John Sullivan, the founder of Ooty, in 1823-25 by damming the mountain streams flowing down Ooty valley.

Though it is an artificial lake it attracts lakhs of tourist towards it every year. Tourist arrivals to lake in 2000 to 2002 were not available. In 2003, the percentage of tourist arrival to lake was 56.29 percentages and it rose up to 61.41 percentages in 2008 indicating that there has been gradual growth in the tourist arrivals to the lake. But in 2005 the trend of growth was reduced because of drought.

The overall tourist growth percentage at the three spots shows a positive growth trend. But in year 2005 due to drought there was slight decrease in the tourist arrivals. When comparing other tourists’ spots at Ooty these three spots receives maximum number of tourist arrivals inducing the researchers to calculate the physical carrying capacity for in-depth analysis of environmental degradation.

Calculation of Physical Carrying Capacity of Botanical Garden for the year of 2008

| Total areas of the Botanical Garden | – twenty two hectares |
| Total length of the trail (path)    | - 400 meters          |
| Width of the trail (path)           | - 1 meter             |
| Each visitor needs at least        | - 1 sqm               |
Maximum visiting hrs per visitor - 1 hr
Opening hrs for visitors per day - 7 hrs
Opening hrs for visitors per day - 360 days

Formula: 
\[ \text{PCC} = \text{length} \times \text{visitors per metre} \times \text{daily duration (hours / day)} \]

By assuming the maximum length of BH is 400 meter \times \text{one visitors / meter} \times \text{seven hours / day}.

\[ \text{PCC} = 400 \times 1 \times 1 \times 7 \]
\[ = 2800 \text{ visitors per day} \]
\[ = 2800 \times 360 \]
\[ = \text{per year} 10,080 \]

Annual visitor arrival to **Botanical Garden** 29,89,002
Actual visitor arrival to **Botanical Garden** 10,08,000
Excess tourist arrivals to **Botanical Garden** 19,81,002

**Calculation of Physical Carrying Capacity of Rose Garden for the year of 2008**

Total areas of the Centenary Rose Garden – Four hectare
Total length of the trail (path) - 200 meter
Slope of the garden - 100 meter
Width of the trail (path) - 1 meter
Each visitor needs at least - 1 sqm
Maximum visiting hrs per visitor - 1 hr
Opening hrs for visitors (Garden) - 7 hrs

Formula: 
\[ \text{PCC} = \text{length} \times \text{visitors per metre} \times \text{daily duration (hours / day)} \]

By assuming the maximum length of RG is 200 meter \times \text{one visitors / meter} \times \text{seven hours / day}.

\[ \text{PCC} = 200 \times 1 \times 1 \times 7 \]
\[ = 1400 \text{ visitors per day} \]
\[ = 1400 \times 360 \]
\[ = 5,04,000 \text{ per year} \]

Annual visitor arrival to **Rose Garden** 20,48,694
Actual visitor arrival to **Rose Garden** 5,04,000
Excess tourist arrivals to **Rose Garden** 15,44,694

**Calculation of Physical Carrying Capacity of Boat House for the year of 2008**

Total areas of the Centenary Rose Garden – Two Kms
Total Length Lake - 500 meter
Each visitor needs at least one Hrs to For Boating - 1 sqm
Opening hrs for visitors (Garden) - 7 hrs

Formula: 
\[ \text{PCC} = \text{length} \times \text{visitors per metre} \times \text{daily duration (hours / day)} \]

By assuming the maximum length of RG is 200 meter \times \text{one visitors / meter} \times \text{seven hours / day}.

\[ \text{PCC} = 850 \times 1 \times 1 \times 7 \]
\[ = 7000 \text{ visitors per day} \]
\[ = 7000 \times 360 \]
\[ = \text{per year} 21,42,000 \]

Annual visitor arrival to **Boat House** 21,42,000
Actual visitor arrival to **Boat House** 18,90,000
Excess tourist arrivals to **Boat House** 2,52,000
Discussion and Conclusions

This study is done mainly to calculate the physical carrying capacity of the three famous tourist spots at Ooty namely Botanical Garden, Rose Garden and Boat House as they have a very impressive percentage growth of tourist arrivals which was calculated and shown at table no.1. Further to establish the fact that these three spot receive excess tourist inflow every year and to assess its impact on the physical environment of the three spots analysis was done with the tourist inflow data of the year 2008 alone and found that

<table>
<thead>
<tr>
<th>Tourist Spot</th>
<th>Excess Tourist Arrivals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Botanical Garden</td>
<td>19, 81,002</td>
</tr>
<tr>
<td>Rose Garden</td>
<td>15, 44,694</td>
</tr>
<tr>
<td>Boat House</td>
<td>2, 52,000</td>
</tr>
</tbody>
</table>

At any cause the number of visitors to any destination cannot be reduced within short frame of time globally as it goes against the ethics of tourism. So the researchers globally has only one option that is to frame suitable strategies to gradually increase the physical carrying capacity of the destinations.

Ooty is widely regarded as queen of hill station in India. Mass tourist inflow though not new to Ooty, in recent times a lot of environmental degradation was observed spoiling the natural beauty of Ooty. Three spots are vital tourist attracting centres which reels under heavy pressure of environmental degradation due to excess tourist arrivals. To remove such negative impacts the following measures are suggested.

In Botanical Garden authorities have to improve the tourism infrastructure facilities such as, parking facilities, waste disposal system; more information centres, public awareness among the native people as well as tourist have to created by the concern authorities to protect the natural environment.

In Rose Garden particularly tourist cause a lot of damages to the lawn and to the core attraction i-e the flowers as they involve in plucking of flowers from the garden. Tourist awareness campaign has to be initiated as rare species are available more in number.

At Boat House many issues have to be looked even though many tourists arrive to Boat House there is no proper infrastructure to accommodate such tourist arrivals. Toilet facility, parking facilities, waste disposal and lake information centre has to be improved by the Boat House authorities.

Ooty is a fragile area which consists of several flora and fauna it has been preserved for future generation. Nature-oriented tourism activities should be encouraged in these spots. Promoting sustainable nature-based tourism, ecotourism, especially in the three spots will help to regulate and control the inflow and its relative impact on its environment. Steps must be taken by the government, environment awareness campaign should be conducted periodically. These measures will go a long way in enhancing and preserving the natural environment of Ooty of the future generation in a sustainable manner.

Reference:


(www.india9.com).

Educating for sustainable tourism development
L.S.Nigam, Nikita Swarnkar

ABSTRACT
The focus of this paper is to provide an overview of the current sustainability content in 4A’s - components of tourism and the identification of key trends education level in this regard. It is based on theoretical study of components of tourism and significance of education while delivering services at various stages. In reciprocal tourist behaviour towards its destination which contributes to sustainable tourism enhancement. Sustainable tourism is an apparently simple concept, referring to a blending of the environmental, economic and socio-cultural aspects of the industry and ensuring a suitable balance is established between these three dimensions to guarantee long-term sustainability.

The World Tourism Organization (WTO) estimates that between 1950 and 2001, the number of international arrivals has grown from 25 million to 689 million, corresponding to an average annual growth rate of 7%. Receipts from international tourism (excluding international fare receipts) reached US$ 476 billion in 2000, an increase of 4.5% over the previous year. Worldwide, the average receipt per arrival amounted to US$680. In addition, domestic tourism is of major importance in many countries.

Tourism is thus an important factor in the economy of many countries and in the management of many cultural sites and natural areas. Travel & Tourism is service based industry, governed and contributed by human being. Being a people-oriented industry, tourism also provides many jobs which have helped revitalize local economies. Yet by its very nature tourism is ambivalent, generating well-known problems such as environment deterioration as well as well-known benefits. This study is guided towards sustainable tourism growth through education. Specifically, the purpose of this study is to analyze the importance of education in twofold for sustainable growth: (1) the components of tourism – 4 A’s (Attraction, Accommodation, Accessibility and Amenities) involved in tourism production and delivery and (2) to evaluate the impact of tourist education level in maintaining environment balance.

The study considers education is a key instrument for bringing about the changes in the knowledge, values, behaviours and lifestyles required to achieve sustainability and stability within and among countries, industries, democracy, human security and peace. Every human being and system goes through continuous learning process same is with tourism. It’s important to assess education level of people at the field level, promoting improved tourism practices, concern shown by UNESCO too, to conserve World Heritage sites and biosphere reserves.

This study will provide a conceptual framework by explicitly recognizing- educating tourism service providers and consumers for sustainable development, a cornerstone of the sustainability paradigm. Therefore, the results of this study will contribute to the ever-increasing body of knowledge in the area of tourism while contributing a practical instrument to be used to nurture sustainability over time.

Keywords: Sustainable tourism; Education; Attraction; Accessibility; Amenities; Tourism Development

Introduction
Tourism is an ever expanding service industry with latent vast growth potential and has therefore, become one of the crucial concerns of not only the nations but also of international community as a whole. According to World Tourism Organization (WTO) findings, 1.6 Billion international arrivals are expected by the year 2020 annually. In fact, it has come up as a decisive link in gearing up the pace of socio – economic development world over. Tourism is largely examined and questioned for its ample potential to give rise to changes in the economic, ecological, societal and cultural edifice of a country. However, two aspects of tourism – its capacity to generate employment, both directly and indirectly, and its potential to earn hard international currency for the host country – have made this industry greatly desirable for all concerned: governments, planners, entrepreneurs and people in general. It has come, therefore, increasingly to occupy a place of importance not only for the business sector but also for the concerned academic and institutions.
Our aim is to reconcile this desire to travel, and the opportunity it brings for growth, with the need to reduce and minimise the adverse impact that tourism can have on the environment.

It is needed to create a new framework for action to achieve a sustainable future for tourism – a future where tourism brings economic and social advantages to host destinations, without damaging social or environmental wellbeing.

“Our Vision is a world in which there are many opportunities to learn about sustainable development. A world where a skilled population makes informed decisions in their home, community, and working lives and in their leisure activities. A world where people understand and take responsibility for the impact they have on the quality of life of other people, locally and globally.” (Sustainable Development Education Panel 1999, p. 11)

A-4 - Components of Tourism:

It is by and large, an agreed proposition that tourism comprises of four primary components – Attraction, Accommodation, Accessibility and Amenities. The diagram shows how tourism industry revolves around four components.

![A-4 Components of Tourism Diagram]

**Fig (i): A-4 Components of Tourism**

- **Attraction:** Attractions include natural attractions such as waterfalls and beaches as well as built attractions of ancient periods along with public domain such as the London Eye, and others are private business developments such as the Disney World brand. Attraction can be activity too such as windsurfing, golf, tennis, swimming, boating, water skiing and canoeing as well as passive activities such as lying on a beach or reading in a park or by a pool.

- **Accommodation:** Accommodation in relation to the type of tourist - bed & breakfast, self catering, boutique hotels, hostels, camp sites, small hotels, all inclusive resorts, stay with relatives.

- **Accessibility:** Access facilities include areas for the disabled and appropriate signage, airports, rail services, websites, banks, rail service, reservations systems, etc

- **Amenities:** Amenities include shops, restaurants and cafes, public transport, tourist information outlets and public toilets, banks, etc.

**Key Issues in Tourism Development**

Tourism is the world’s largest industry. This fact has now been recognised all over the world. Although a smokeless industry, it has environmental implications. Expanding tourism has the capacity to pollute the environment as would any smoke ridden industry. A few years back, the United Nations organized a conference in Stockholm on human world attach to maintaining and
improving the quality of human life and to enrich the human environment. It is a fact that all over the world man has been using the natural resources without any thought for the future. It is the misuse of these resources which causes problems. Today environmental pollution poses a serious threat to life on earth and this is true not only of the areas where there is a great concentration of industries, but also areas where there is a great concentration of tourists.

The disadvantages of haphazard and unplanned development of tourism are well illustrated by many areas in North America, Western Europe and also to a greater or lesser extent throughout large parts of Asia’s tourism circuit. Yugoslavia’s Adriatic coast and the Seychelles are other examples. Many of the world’s finest resorts have become ugly. To control this condition, Sochi, Russia’s popular Black Sea resort has proclaimed itself the world’s first ‘No Smoking city’. In Indian context, sea beaches of Mumbai are been controlled from overcrowding, new laws ban smoking in all restaurants, cinema theatres, public transportation, and hospitals and on the beaches. Apart from that there are many examples of uncontrolled growth of industries, shops and also slums near tourist spots creating problems of environmental pollution. Many of the beaches of North America and Western Europe bear a mute testimony to the havoc that can be wrought by uncontrolled development of tourism.

Destinations once noted for their particular character are reduced to unattractive showpieces as many countries endeavour to keep pace with the visitor inflow. Despite many measures taken by Government to control the unplanned constructions and over use of natural resources were found insufficient and the expansions threatened to destroy environment i.e. the tourist attraction.

Tourism development germinates special ecological problems not encountered in other types of economic activity. The environmental resources ‘exploited’ for tourism attract tourists because of their outstanding beauty, recreational possibilities or educational and cultural interest. The environmental amenities which attract tourists have tended to be taken for granted. Preservation of their quality has only recently begun to concern tourism development planners. For tourism the quality of environment is the basis for attracting visitors and needs to be conserved. Tourism development can become positive factor for improving environment if some amount of intelligent planning is done. In fact, the quality of the tourism product depends upon a high quality natural environment. An example set by Matheran, as only pedalling tourist destination in Asia.

It’s not necessary through tourism development; the environment is been degraded always but, in fact, can be improved. So great has been the national and international demand for tourism and recreational facilities that governments have increasingly to face up to the choice between extending public access and availability of sites and conservation and protection against over development. Governments are increasingly aware that future growth of the industry will necessitate careful management and avoiding overdevelopment of regions of natural beauty. Moreover, saturation in principal destination areas will require a more active policy diversification and redistribution of tourist flows.

The challenges facing tourism are wide ranging globally; few major issues are mentioned as:
- Minimise environmental impact and resource use
- The impact of tourism transport
- Improve the quality of tourism jobs
- Maintain and enhance community prosperity and quality of life

**Understanding Sustainable Tourism Development:**

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Tourism is one of the fastest growing sectors of the global economy and developing countries are attempting to cash in on this expanding industry in an attempt to boost foreign investment and financial reserves. While conceding that the uncontrolled growth of this industry can result in serious environmental and social problems, the United Nations contends that such negative effects can be controlled and reduced.

Sustainability is linked very closely to carrying capacity. Both are related to the concept of maintaining a level of tourism which does not cause irreversible damage and which allows tourism in a given destination to continue into the future. The WTO has described sustainability as follows:

*The underlying approach now applied to tourism planning as well as to other types of development, is that of achieving sustainable development. The sustainable development approach implies that the natural, cultural and other resources of tourism are conserved for continuous use in the future, while still bringing benefits to the present society.*

*The concept of sustainable development has received much emphasis internationally since the early 1980’s, although tourism plans prepared even before that period often were concerned with conservation of tourism resources.*

*The sustainable development approach to planning tourism is acutely important because most tourism development depends on attractions and activities related to the natural environment, historic heritage and cultural patterns of areas. If these resources are degraded or destroyed, then the tourism areas cannot attract tourists and tourism will not be successful. More generally, most tourists seek destination that have a high level of environmental quality – they like to visit places that are attractive, clean and neither polluted nor congested.*

*It is also essential that residents of the tourism area should not have to suffer from deteriorated environment and social problems. [World Tourism Organization, National and Regional Tourism Planning (Madrid: WTO) 1994.]*

From above descriptions our concept of sustainable future is the key principle that sustainability is about thinking about forever’

This means committing ourselves to the common good by thinking differently, considering things previously forgotten, broadening our perspectives, clarifying what we value, connecting with our neighbours, and providing hope for future generations. Building the capacity to think in terms of ‘forever’ is a key task of education.

Educating for a sustainable future is not so much about a destination as about the process of learning to make decisions that consider the long-term economy, ecology and equity of all communities. Its goal is to build an enduring society. This involves learning how to anticipate the consequences of our actions and envision a sustainable future and create the steps needed to achieve the vision. Individuals and societies will perpetually have to make choices. How those choices are made and the information and ethical discernment used in making them will determine whether our visions of a sustainable future are achieved.
**Education for Sustainable Development (ESD):** It has generally been accepted that achieving sustainable development will require balancing environmental, societal, and economic considerations in the pursuit of development and an improved quality of life, as discussed in Rio Earth Summit. A number of ideals and principles underlying sustainability have been identified. These include intergenerational equity, gender equity, just and peaceable societies, social tolerance, environmental preservation and restoration, poverty alleviation and natural resource conservation. Agenda 21 identified education as an essential tool for achieving sustainable development and highlighted four areas of action for education.

These were:
1. Improve the quality of basic education;
2. Reorient existing education programmes to address sustainable development;
3. Develop public awareness and understanding; and
4. Provide training for all sectors of private and civil society.

ESD is a vision of education that seeks to empower people to assume responsibility for creating a sustainable future. Central to ESD is the concept of culture as an essential underlying theme. It has been acknowledged that there is no “single route” to sustainable development. Further, it is clear that understandings of, and visions for, sustainability will be different for each of us and that we will need to work together to negotiate the process of achieving sustainability. There are many different stakeholders in sustainable development (i.e., governments, businesses, educational institutions, media, youth, etc). Each of these sectors has a different vision of sustainable development and how it can contribute. Some are interested in environmental preservation and protection; some have economic development interests while others may be more interested in social development. In addition, how each nation, cultural group and individual views sustainable development will depend on its own values. The values held in a society help define how personal decisions are made and how national legislation is written (UNESCO (2005).

The challenge is to bring these different stakeholders together so that they may collaborate in partnerships to find a balance between their interests and priorities. Various approaches to ESD encourage people to understand the complexities of, and synergies between, the issues threatening planetary sustainability and understand and assess their own values and those of the society in which they live in the context of sustainability.

**Thresholds of Education and Sustainability**

Education in its broader sense is any act or experience that has a formative effect on the mind, character or physical ability of an individual. In its technical sense education is the process by which society deliberately transmits its accumulated knowledge, skills and values from one generation to another.

All education serves a purpose or society would not invest in it. Driver education, for example, seeks to make our roads safer for travelers. Fire-safety education seeks to prevent fires and tragic loss of lives and property.

Consider for instance, that when education levels are low, economies are often limited to resource extraction and agriculture. In many countries, the current level of basic education is so
low that it severely hinders development options and plans for a sustainable future. A higher education level is necessary to create jobs and industries that are “greener” (i.e., those having lower environmental impacts) and more sustainable.

“The relationship between education and sustainable development is complex.”

Generally, it has been observed that basic education is a key to a nation's ability to develop and achieve sustainability targets. Education can improve agricultural productivity, enhance the status of women, reduce population growth rates, enhance environmental protection, and generally raise the standard of living. But the relationship is not linear. For example, four to six years of education is the minimum threshold for increasing agricultural productivity. Literacy and numeracy allow farmers to adapt to new agricultural methods, cope with risk, and respond to market signals, thereby reducing the risks to the environment and human health.

Education benefits a woman in life-altering ways. An educated woman gains higher status and an enhanced sense of efficacy. For females, education profoundly changes their lives, how they interact with society, and their economic status.

This level of education also increases the probability of employment in a changing economy. Few studies have been carried out on how education affects environmental Stewardship, but one study suggests that a lower-secondary education (or approximately nine years) is necessary to intensify use of existing land and to provide alternative off-farm employment and migration from rural areas. Finally, a subtle combination of higher education, research, and life-long learning is necessary for a nation to shift to information or knowledge-based economy, which is fueled less by imported technology and more by local innovation and creativity (UNESCO-ACEID, 1997).

Conclusion: Sustainable development in components of tourism through education

Education is essential tool for achieving sustainability. People around the world recognize that current economic development trends are not sustainable and that public awareness, education, and training are keys to moving society toward sustainability.

It is difficult to pinpoint the responsibility to anyone particular agency department for achieving sustainable tourism development. Our framework takes these challenges to incorporate the sustainable development in components of tourism through education.

1. Attraction – Marketing

The first component of tourism “Attraction” is a motivation for travel which is en-cashed by marketing institutions in creating zeal for tourism. Creating awareness about sustainable tourism development on first hand by this marketing institution can be a guiding tool to complete the link between the hosts and the guest so as to make it “profitable” on both sides.

As tourism has the potential to actively engage with a large number of visitors, it is ideally placed to encourage them to act in a more sustainable way. Gaining knowledge about people’s awareness and understanding and what motivates them to act in the interests of the environment is important if high quality, low environmental impact holidays and pro-environmental attitudes are to be promoted.

Corporate level training for all sectors - including business, industry, higher education, governments, nongovernmental organizations (NGOs), and community organization – are encouraged to train their leaders in environmental management and to provide training to their workers.
As applied to service industry like tourism, the most important function of marketing is to bring about an awareness of the product and its benefits in the minds of both current as well as potential customers. Systematic communication both with the actual as well as potential customers as also with trade intermediaries and opinion leaders.

A green business can have a marketing edge over non-green competitors as it can enhance the image of a business and lead to more bookings. It can also be run more cost effectively if resource consumption is reduced.

One needs to market not just the facilities, but the concept of Responsible Tourism as well.

**Successful outcomes**

- An increase in tourism businesses that are members of a recognized environmental certification scheme, or who have taken steps to reduce their environmental footprint, and an increase in visitors using the facilities of those businesses
- Businesses leading by example (e.g. recycling) and making responsible choices easy and attractive for their customers
- Messages embedded in national and regional marketing campaigns on responsible travel
- An increase in the number of tourism businesses participating in green assessment schemes

**2. Accommodation, Accessibility -- Ownership**

Main contributor in tourism service delivery is the second component of tourism. Increasing the basic level of education among its service provider is the foundation upon which the sustainable tourism development will progress.

Simply increasing basic literacy, as it is currently taught in most countries, will not advance sustainable tourism development indeed, if destinations and nations hope to identify sustainability goals and work toward them, they must focus on skills, values, and perspectives that encourage and support public participation and community decision making. To achieve this, basic education must be reoriented to address sustainability and expanded to include critical-thinking skills, skills to organize and interpret data and information, skills to formulate questions, and the ability to analyze issues that confront communities.

**Successful outcomes**

- A better educated workforce that understands the impacts of tourism on the environment and can help customers to make informed choices on the environmental impact of those choices
- A reduction in the use of electricity, fossil fuels, water and waste through efficiency measures and customer engagement
- An increase in the number of tourism businesses participating in the quality assessment schemes

**3. Accessibility -- Guidance**

Accessibility is boon of tourism industry, reaching to destination is impossible without its presence. Vastly it has been seen that to fill the gap between destination & tourist lots of negligence in reference to environment conservation has been done. Education for people involved in this sector can be guiding factor in sustainable development.

**Successful outcomes**
➢ Tourism developments planned to reduce the CO2 impacts from transport, with the best possible use of public transport and other alternative means of travel, such as walking and cycling
➢ Integrating minimum sustainable practices into the transportation and creating quality assessment schemes

National level tourism educational programme can be boon in standardization of tourism services.

4. Amenities -- Hospitality Management Services
The fourth component is that of ensuring that the accommodation provided to visitors, the travel arrangements, ease in booking, etc. meets uniform levels of comfort and efficiency while keeping in mind the tenets of Responsible Tourism.

The accommodation could be in home stays or in a specially built “resort”. It needs to be managed efficiently with hygiene and integrity being key issues needing constant attention. Support is needed from the mainstream hospitality industry to ensure a level of service that tourists will appreciate and come back to.

Ideally, the food provided should be of the region while keeping in mind oil and spice levels to cater to different types of visitors. Again, hygiene is an important issue since in many rural areas; the visitor will not have a choice of places to eat from. The Venture will be the main source of food and therefore sufficient flexibility will have to be maintained.

The visitors will need to be provided support services in terms of travel arrangements, guide services, communication facilities, etc. Again these need to be developed ensuring that the local communities benefit while not compromising on the visitor’s convenience.

In reorienting education to address sustainability, program developers need to balance looking forward to a more sustainable tourism development programmes with looking back to traditional ecological knowledge. Indigenous traditions often carry with them the values and practices that embody sustainable resource use.

For a tourist destination, implementing sustainable development programme is a huge task. Fortunately, formal education does not carry this educational responsibility alone. The non-formal educational sector (e.g., nature centers, nongovernmental organizations, public health educators, and agricultural extension agents) and the informal educational sector (e.g., local television, newspaper, and radio) of the educational community must work cooperatively with the formal educational sector for the education of people in all generations and walks of life.

This component will need to walk the fine balance between a tourism service provider’s native sense of hospitality and the need to run the sustainable development as a business.

   Successful outcomes
   ➢ An increase in the number of employees undergoing customer service training
   ➢ A consistently high percentage of visitors indicating they are satisfied with the facilities provided

Local & Tourist education level -- Making it Responsible Tourism
Sustainability requires a population that is aware of the goals of a sustainable tourism and has the knowledge and skills to contribute to those goals. The need for an informed tourist becomes ever
more important with the increase in the number of tourist arrivals. An informed tourist, which engages in tourism related activities can support to environmental conservation & establishing ecological balance.

The Unique Selling Proposition (USP) of this whole concept is that it is Responsible Tourism. By this we mean that a form of Tourism where the rules of engagement are defined by the community and a form of Tourism where the tourists do minimal “damage” to the natural and cultural heritage of a community. The idea of this kind of tourism is to ensure that the visitors come not just to see another way of life, like visiting a zoo, but are able to interact with another way of life and take back a new perspective about destination with them.

“Community” could refer to one person or several persons who are primarily interested in the Responsible Tourism. They need to have a strong interest in the region in which this is to be located. This person or persons could be a cowherd, a landlord, a teacher, an NGO, a craftsperson, a co-operative, a businessperson, etc. They must know the local area thoroughly, appreciate its finer points and be able to convey that to the future visitors. It is not necessary that they are born in the region or can trace their ancestry to their region. It is more important that they have a strong sense of belonging to the region.

Change is inevitable. Any community in region/ country has access to the outside world through an increasingly wide range of media and this will definitely lead to changes within the community.

However, an influx of tourists will lead to change at a much faster pace and could lead to unwanted impact. Therefore there is a need to create awareness amongst both the community and the visitors about this potential and give the community enough rope to analyse and foresee the possible impact.

**Successful outcomes**

- Regular contact with the local community and local businesses to gauge satisfaction and acceptability of existing and planned tourism e.g. through focus groups and residents attitude surveys
- A high percentage of spend by visitors on local products
- Tourism businesses buying and using locally produced food
- Job vacancies in tourism filled by local people where appropriate

Education for sustainable development aims to help people to develop the attitudes, skills and knowledge to make informed decisions for the benefit of themselves and others, now and in the future, and to act upon these decisions.

**Reference**

Blaug M, 1968 Economics of Education – Volume 1
Faulkner Bill, 2003 – Aspects of Tourism - Progressing Tourism Research Page 163-165
Kamra Krishan K, Chand Mohinder, 2002, Basics of Tourism
Manente Mara, Celotto Emilio 2004, Sustainable tourism to decline: how to monitor the risk
Mirlabayev Batir, Shagazatova Malika - The Economic and Social Impact of Tourism
Movfroth Martin, Mun Ian, 1998, Tourism and Sustainability
Needham Nancy J, August 2006, Travel daily News, Tourism industry boosts educational programs around the world,
Negi Jagmohan, 2004 – Tour Guide & Tour Operations
Nicole L. Davis, Development of a Tourism Education Program in Southern Illinois: A Pilot Project for Community Colleges
Pizam Abhram, Mansfeld Yeol, 1999 – Consumer Behaviour in Travel & Tourism Page 15 – 37
Seth Pran, 1997 Successful Tourism Management – Fundamental of Tourism Vol -1
The European Consensus on Development – The contribution of Development Education & Awareness Raising
Tilbury Daniella, 2002 - Education and sustainability: responding to the global challenge
Sustainable Development Education Panel 1999, p. 11
Sustainable Development Education in England, Wales, Northern Ireland and Scotland, 2004, Research Study for the Sustainable Development Education Liaison Group
UNESCO, ESD 2005, [URL]
United Nations Economic & Social Commission for Asia & the Pacific [URL]
UNESCO - Agenda 21, Chapter 36, 1998 [URL]
UNESCO, Education for All Monitoring Report 2008, Net Enrollment Rate in primary education
UNESCO – ACEID (Asia-Pacific Centre of Educational Innovation for Development), 1998, 4th International conference
UN - DESA Discussion Paper No. 29 - A New Approach to Sustainable Tourism Development: Moving Beyond Environmental Protection

Figure:
Fig (i): A-4 Components of Tourism – representation of components in pictorial format
Best Environmental Management Practices in Hospitality Industry of India: Issues, Challenges & Opportunities

Shakti Prakash

ABSTRACT
Hospitality Industry always plays highly significant role in the sustainable development of a country, India is not an exception. Ongoing economic liberalization has given a new impetus to the growth of the same. Presently, Indian hospitality industry is growing at the annual growth rate of 15% and contributing 5.8% ($1.17 trillion) in the GDP along with expectation of touching $250 million in the next 10 years. All major cities & tourist centers are experiencing a phenomenal growth of hospitality industry, for example, 20,000 more hotel rooms are required for Commonwealth Games to be held in 2010 in New Delhi as a result of which Government has sanctioned 300 more hotel projects. Similar type of demand & supply gap exists even at the national level as 61,000 rooms are available against the demand of 90,000. This gap is expected to widen further as economy opens & grows. Planning, development & operation of hotels, motels, tourist resorts etc. is always beset with a lot of ecological & environmental impacts & related problems, especially in areas of energy management, waste management, water conservation as well as in additional areas of purchasing activities, organization & system and external relations, green certification programs as there is a lot of consumption of local and imported durable goods, energy & wastes along with emission of a large amount of carbon-dioxide. Implementation of Best Environmental Management Practices (BEMPs) in the aforementioned key & allied areas & functions from supply chain onwards not only brings financial benefits & operational efficiency but also reduction in risks to human health, liability, enhancement in the public image of the industry & mitigation of ongoing GHG induced climate change. Thus, environmental management is continuously evolving as a sustainable business strategy among hospitality industry, especially hoteliers. A wide spectrum of BEMPs have been suggested & being implemented in hospitality industry across the globe, including India, however, Indian counterpart has still not responded positively towards the implementation of the same in a proactive manner, except few well known five star hotels & tourist resorts due to the lack of appropriate awareness & attitudes among top level managerial staff. There is an urgent need for governments, organizations & stakeholders involved in the hospitality industry of the country to focus on creating & enhancing environmental attitudes & awareness among top & other levels of managerial staff by providing appropriate data and information on successful implementation of BEMPs. The present paper intends to analyze, review and suggest key challenges, issues & opportunities for implementing BEMPs in hospitality industry of India for the sustainable growth of the same.

Keywords: Agenda 21, Supply Chain, BEMP, Environmental Management systems, Green Procurement, Green Globe, Ecotel

Introduction:
The Indian hospitality industry is growing at a rate of 15 percent annually. The current gap between supply (61,000 rooms) and demand (90,000 rooms) is expected to widen further as the economy opens and grows. To overcome, this shortage Indian hotel industry is adding about 60,000 quality rooms, currently in different stages of planning and development, which should be ready by 2012. Hotel Industry in India is also set to get a fillip with Delhi hosting 2010 Commonwealth Games. Government has approved 300 hotel projects, nearly half of which are in the luxury range. There is a mismatch between demand and supply, leading to higher occupancies and average room rates. Operation & allied activities of hotel industry have considerable potential of adverse impacts on environment & society, if not managed appropriately. Environmental Management through the implementation of Best Environmental Practices (BEMPs) has consistently evolved as successful business strategy in hotel industry across the world including India.
Environmental Management in Hotel Industry: Historical Perspectives & Priority Issues

Environmental management in the hotel industry traces its roots to two major initiatives in the 1990s - Agenda 21 for the Travel and Tourism Industry and ISO 14001. Following the Rio Earth Summit in 1992, the World Tourism Organization and the World Travel and Tourism Council published Agenda 21 for the Travel and Tourism: Toward Environmentally Sustainable Development. Agenda 21 defines a broad array of environmental and social impacts associated with hotel operations and the principles for minimizing these impacts. ISO 14001 is the international environmental management system standard promulgated in 1996 by the Geneva-based International Standards Organization. The World Tourism Organization, together with the World Travel and Tourism Council (1997) has developed an Agenda 21 for Travel and Tourism with following ten priority items apply to the tourism industry:

- Minimization, reuse and recycle waste.
- Water management.
- Management of hazardous waste.
- Waste water management.
- Transportation.
- Approach and soil management.
- Participation of clients and the local community in environmental management.
- Design sustainable tourism services.
- Sponsors for sustainable development.
- Efficiency, conservation and energy management.

Environmental Issues, Challenges & Opportunities:

Environmental issues of significant impacts associated with tourism and hospitality facilities during operations include the following:

- Resource consumption
  - Emissions to air
  - Wastewater
  - Hazardous Materials Management
  - Waste
  - Biodiversity conservation
  - Noise
  - Pesticide use
  - Fertilizer Use
  - Supply Chain Management
  - Green certifications

The biggest challenges lie in the implementation of BEMPs in energy-environmental issues identified above. Followings are main opportunities to realize the implementation potential of the same by cultivating & adopting the appropriate attitudes among mid & top level management staff in the hotel industry:

i. Water

To monitor water consumption and rationalize its use
To save and protect local resources
To control energy use and monitor its consumption
To save energy and reduce atmospheric pollution

**ii. Energy**
To reduce waste at the source and improve waste management
To implement a recovery and recycling strategy

**iii. Wastes**
To reduce the impact of consumption on the environment
To promote the development of local, ecological and social product flows

**iv. Purchasing policy**
To improve product handling and minimize losses and wastage
To manage and master the hotel’s supply lines

**v. Logistics**
To limit noise pollution
To improve air quality inside buildings
To reduce the impact on the local landscape

**vi. Noise, air quality, and landscape integration**

**vii. Pesticides & fertilizers use**

**Defining Best Environmental Management Best Practice (BEMP)**

Best practices represent the preferred actions, from an environmental perspective, to perform a given function or service. Because of the similar nature of hotel and resort operations, international organizations have published guidebooks assisting hotel owners and managers determine the appropriate equipment, supplies and changes in staff activities that constitute “best practices”. (International Hotel Environment Initiative, 1993) It is important to note that the combination of best practices will differ for properties of different size (small verses large), location (city verses beach), type (business verses leisure) and management (international chain verses independently owned and operated).

**Benefits of Implementing Best Environmental Management Practices**
BEMPs can affect a direct reduction in costs by reducing spending on energy and water as well as waste water treatment and waste disposal. Conservation efforts such as the management of hazardous waste and clean water would in a workplace and a common area safer, which in turn, may lead to a lower staff turnover, a reduction in working time lost as a result of injury or illness and a lower risk of incurring liability.

The publicity that is generated when the practices are inadequate may undermine the reputation of the hotel, causing operating losses. However, good practice can become an effective tool for marketing in a market having increasingly international guests who are looking for destinations which are environmentally and socially responsible. There are strong financial and managerial benefits for business owners in the tourism and hospitality industry to pursue pollution prevention through the implementation of BEMPs. Benefits of pollution prevention efforts include:
Indian Journal of Applied Hospitality and Tourism Research

i. **Cost Savings:** Reducing the amount of raw materials, energy, production, operating and disposal costs will increase a company’s bottom line.

ii. **Health:** Pollution prevention reduces risks to human health and safety as well as occupational and community exposure.

iii. **Liability:** Pollution prevention reduces the potential liability for environmental problems and reduces insurance needs.

iv. **Environmental:** Pollution prevention protects the environment and conservation of our natural resources while saving a company money.

v. **Public Image:** Pollution prevention enhances a company’s public image by taking a proactive approach to environmental protection.

**Implementing Best Environmental Management Best Practices (BEMPs) in Hotels: An overview of International & Indian Hotel Industry**

Currently, several hotel companies in the world including India as discussed briefly at the end of this section, with a proactive environmental commitments are implementing BEMPs in various operational areas, such as housekeeping, laundry, food and beverage service, guest rooms, conference and meeting facilities. There are three main operation areas of categorization of such practices i.e. energy management, waste management and water conservation. (Bohdanowicz, 2006; Iwanowski & Rushmore, 1994) Besides aforementioned three key areas, purchasing activities, organization and system, and external relationship can also be included in decision areas and functions for the implementation of BEMPs in the hotel industry in India or elsewhere in the world.

**Energy management**

Energy saving has been considered one of the most significant areas of environmental management in the hotel industry because hotels in general consume considerable amount of electricity and fossil fuel energy in various operational areas. According to the U.S Environmental Protection Agency (EPA), reducing energy use by 10 percent across the hospitality industry would save $285 million (McLeish, 2007). It is reported that the potential for energy saving through BEMPs such as replacing light bulbs with energy efficient ones has been estimated at 10-25 percent depending on the age and size of the hotel (Bohdanowicz, 2006). A lot of research studies has identified different energy management programs for hotel companies in different geographical areas and have incorporated into their operations. Erdogan and Barias (2007) examined the extent of BEMPs adopted among Turkish hotels. They found that adopting occupancy sensors or a key-card control system to save in-room energy is the most widely adopted energy saving practice, and more than 80 percent of four star hotels in the sample installed the measures. Energy-efficient lighting is also one of the most widely used energy saving applications (Bohdanowicz, 2006; Erdogan & Barias, 2007).

A review of academic and industry trade literature (Kasavana, 2008; Mensah, 2006; Erdogan & Baris, 2007; Sherman, 2008; Iwanowski & Rushmore, 1994; Bohdanowicz, 2006; McLeish, 2007; Hanna, 2008), suggests that followings are main BEMPs which are currently being implemented for energy management in the hotel industry across the world including India:

Implementing a renewable energy program such as the use of wind power, solar power, and run-of river power.
Adopting Automated (Computerized) energy control system.
Replacing incandescent light bulbs with fluorescent lighting. (Using high energy efficient lighting).
Installing energy-efficient laundry equipment.
Using digital thermostats to control guestroom energy consumption.
Installing occupancy sensors (they automatically turn the lights out when guests leave the room).
Reducing air-circulating equipment through implementing a smoke-free policy.
Using waste heat from the power generator.
Installing triple-glazed windows or reflective glass to save energy for heating and cooling.
Replacing outdoor and exit signs with Light Emitting Diode (LED) signs.

Besides aforementioned practices, designing parking areas under the building of the hotels can help greatly reduces the site footprint as well as eliminates tons of blacktop paving, which causes a heat island effect. This may be the one of the ways that helps in the reduction of cooling costs of the hotels (Kasavana, 2008).

Water conservation

It has been reported that a hotel consumes about 209 gallons of water per occupied room each day (Brodsky, 2005). With increasing awareness of cost saving opportunities through water conservation, various related practices have been developed and implemented among hotel companies. According to Marriott International’s linen reuse program, encouraging guests to reuse lines and towels during their stay contributes to saving 11 to 17 percent on hot water (Marriott International, 2007). Linen and towel reuse programs are well-established practices in hotels in most countries (Bohdanowicz, 2006; Erdogan and Baris, 2007; Mensah, 2006). This program saves not only hot water and energy, but also reduces the use of detergents, and thereby reduces wastewater. A 100-guest room property with 75 percent occupancy can save an estimated $25,000 per year through a linen and towel reuse program. These savings are derived from an 81,000 gallon reduction in water consumption and 540 gallon reduction in detergent (Brodsky, 2005).

Besides, a linen and towel reuse program, installing low-flow faucets and showerheads, and low-water-volume toilets has attracted much attention from hoteliers as one of the most efficient water saving measures (Bohdanowicz, 2006; Iwanowski & Rushmore, 1994) because these measures can be implemented through a relatively low level of modification and financial investment. Many hotels across the world including India have adopted the following practices for water conservation (Kasavana, 2008; Mensah, 2006; Erdogan & Baris, 2007; Sherman, 2008; Iwanowski & Rushmore, 1994; Kirk, 1998; Bohdanowicz, 2006; McLeish, 2007; Hanna, 2008):

- Using water-efficient devices (Low-flow or infrared-activated faucets, low-flow showerheads, low-water-volume toilet, sink aerators, and Energy Star/ISI qualified cooking devices etc.)
- Instituting a linen reuse program.
- Regularly fixing toilet leaks.
- Using water-efficient laundry equipment and dishwashers.
- Placing water meters in guestrooms to track usage.
Adopting water saving campaigns in kitchens (washing dishes when there are full loads or not using running water to wash vegetables etc).
Adopting water-efficient or xeric gardening techniques.
Using treated wastewater in garden irrigation.

**Waste reduction and recycling**

Waste management is always designed and implemented to reduce the volume and toxicity of garbage (Iwanowski & Rushmore, 1994). Erdogan and Baris (2007) conducted a study to examine environmental practices implemented by Turkish hotels and found that paper and food waste are the greatest amount of waste generated sources of hotels. The food & beverage service area in particular generates various solid and organic wastes such as packaging and food waste, aluminum cans, glass bottles, corks and cooking oils. The housekeeping operation also generates cleaning materials and plastic packaging. In addition to solid waste from front-of-house areas, back-of-house areas also generate a huge amount of solid waste such as toner cartridges, paper and cardboard waste and many other wastes from the hotel facility maintenance department (Baker, 2008). The level of hotels’ commitment to waste sorting and recycling varies, depends on regulatory pressures and local government’s support. For example, European hotels actively implement waste sorting and recycling programs in offices and kitchens, but not in guestrooms (Bohdanowicz, 2006, Erdogan & Baris, 2007) while Ghanaian hotels are less committed to recycling programs, with only 17 percent of sampled hotels adopting recycling programs (Mensah, 2006). Erdogan and Baris (2007) pointed out that working with local governments and recycling firms can significantly promote the waste sorting and recycling activities among hotels.

Similar is the case with Indian hotels, especially, Leela group, Taj Group, Welcome group, Ecotel hotels etc. The following practices concerning waste management have been implemented in the hotel industry across the world including India (Baker, 2008; Mensah, 2006; Erdogan & Baris, 2007; Kirk, 1998; Kasavana, 2008; Sherman, 2008; Iwanowski & Rushmore, 1994; Bohdanowicz, 2006; McLeish, 2007):

- Placing recycling bins in all front and back-of-house areas.
- Purchasing used or recycled-content products.
- Adopting a donation program (leftover guest amenities, old furniture and appliances and food).
- Composting organic kitchen waste.
- Using refillable amenity dispensers.
- Providing reusable items such as cloth napkins, glass cups, ceramic dished with food and beverage service.
- Grinding guest soaps to use as laundry detergent for hotel uniforms.
- Purchasing food items and cleaning chemicals in bulk containers.
- Recovering used cooking oil and food waste.

**Pesticide Use**

Tourism resorts with large land tracts (e.g. golf courses, vineyards, and sports fields) may use significant quantities of chemicals (e.g. chemical fertilizers and pesticides, including herbicides, rodenticides, and insecticides). The primary aim of pest management should be not to eradicate
all organisms, but to manage pests and diseases that may negatively affect tourism facilities so that they remain at a level that is under an economically and environmentally damaging threshold.

Pesticides should be managed to avoid their migration into offsite land or water environments by establishing their use as part of an Integrated Pest Management (IPM) strategy and a documented Pest Management Plan (PMP). The following stages should be considered when designing and implementing an IPM strategy, giving preference to alternative pest management strategies, with the use of synthetic chemical pesticides as a last option.

**Alternatives to Pesticide Application:**

The following alternatives to pesticides should be considered:
- Provide those responsible for deciding on pesticides application with training in pest identification, weed identification, and field scouting
- Use mechanical weed control and/or thermal weeding
- Support and use beneficial organisms, such as insects, birds, mites, and microbial agents, to perform biological control of pests
- Protect natural enemies of pests by providing a favorable habitat, such as bushes for nesting sites and other original vegetation that can house pest predators
- Use animals to graze areas and manage plant coverage; Avoid the use of pesticides listed in Annexes A and B of the Stockholm Convention, except under the conditions noted in the convention
- Use only pesticides that are manufactured under license and registered and approved by the appropriate authority and in accordance with the Food and Agriculture Organization’s (FAO) International Code of Conduct on the Distribution and Use of Pesticides
- Use only pesticides that are labeled in accordance with international standards and norms, such as the FAO Revised Guidelines for Good Labeling Practice for Pesticides
- Select application technologies and practices designed to reduce unintentional drift or runoff only as indicated in an IPM program, and under controlled conditions
- Maintain and calibrate pesticide application equipment in accordance with manufacturer’s recommendations
- Establish untreated buffer zones or strips along water sources, rivers, streams, ponds, lakes, and ditches to help protect water resources

**Fertilizer Use**

Fertilizer use in ornamental and recreational areas, particularly golf courses, should be conducted in a manner that aims to prevent, reduce, or control contamination of groundwater resources and eutrophication of surface water resources from runoff and leaching of excess fertilizer. The periods of greatest risk for runoff and leaching may be during and immediately after fertilizer application and during heavy rains that cause rapid runoff. Recommended fertilizer management strategies should be followed & implemented
- Avoiding excess fertilization by analyzing soil to establish nutrient needs
- Timing the application of crop nutrients using meteorological information to avoid, where feasible, application during or close to precipitation events
Establishing buffer zones, strips, or other “no-treatment” areas along water sources, rivers, streams, ponds, lakes, and ditches to act as a filter to catch potential runoff from the land.

Storing fertilizers in their original packaging and in a dedicated location that can be locked and properly identified with signs, and with access limited to authorized persons. Limited to authorized people. No human or animal food may be stored in this location. The store room should also be designed with spill containment measures and sited in consideration of potential for contamination of soil and water resources.

Mixing and transfer of pesticides should be undertaken by trained personnel in ventilated and well-lit areas, using containers designed and dedicated for this purpose.

Containers should not be used for any other purpose (e.g., drinking water). Contaminated containers should be handled as hazardous waste, and should be treated accordingly. Disposal of containers contaminated with pesticides should be done in a manner consistent with FAO guidelines and with manufacturer's directions.

Purchase and store no more pesticide than needed and rotate stock using a “first-in, first-out” principle so that pesticides do not become obsolete. Additionally, the use of obsolete pesticides should be avoided under all circumstances.

A management plan that includes measures for the containment, storage and ultimate destruction of all obsolete stocks should be prepared in accordance to guidelines by FAO and consistent with country commitments under the Stockholm, Rotterdam and Basel Conventions.

Collect rinse water from equipment cleaning for reuse (such as for the dilution of identical pesticides to concentrations used for application).

Ensure that protective clothing worn during pesticide application is either cleaned or disposed of in an environmentally responsible manner.

**Supply Chain & Additional Areas of BEMPs:**

Green procurement, efforts to enhance external stakeholder relationships, and an organizational monitoring and system to control those practices are increasingly taken into consideration for pro-environmental management (Brown, 1996; Bohdanowicz, 2006; Mensah, 2006; Erdogan & Baris, 2007). Practices in additional three areas of environmental management are:

i. **Green procurement**
   - Purchasing eco-friendly cleaners and detergent.
   - Purchasing locally produced ingredients.
   - Using environmentally responsible suppliers.

ii. **External relationships**
   - Establishing a formal channel to cooperate NGOs.
   - Establishing customer education programs.
   - Supporting local communities to enhance the local environment.

iii. **Organizational system and control**
   - Incorporating environmental reporting in corporate control systems.
   - Providing employee environmental training.
   - Having a written environmental policy.
Having a manager or a team in charge of environmental management.
Top management involvement in environmental management.
Pursuing green certifications.

**Green Certifications and Programs**

There are many green certification programs that some leading environmental organizations offer to hospitality companies that strive to be green establishments.

Green Globe is the first internationally acceptable scheme that recognized environmental performance specific to the travel and tourism industry. Green Globe 21 was developed by adopting Agenda 21, which was established in 1994 by the World Tourism Organization (WTO), the Earth Council (EC) and the World Travel and Tourism Council (WTTC). It is comprised of three levels of certification depending on hotels meeting requirements and standards. A hotel seeking Green Globe can first gain Bronze certification by meeting Green Globe requirements and then, once the hotel passes an on-site audit as well as on-line assessment program for 2 years they are awarded the Silver certification. After 5 years of continuous compliance, a hotel can achieve the Gold certification, the highest level of the certification (Green Globe, 2008).

Several Indian hotels have registered themselves for Green Globe Certification with the World Travel and Tourism Council (WTTC). Green Globe Certification has currently been obtained by participants from over 30 countries spread across all the continents of the globe. The present aspirants are The Malabar House in Fort Cochin, Hotel Bawa International in Mumbai, Le Royal Meridien in Chennai, Pondicherry Tourism and Transport Development Corporation and Eco Adventures Private Ltd.

Afore discussed BEMP's have been being very widely implemented among prominent Indian hotels such as:

**I. Taj Group hotels:**
Taj Hotels, Resorts and Palaces, today a global hospitality chain with over 75 properties in over 60 locations. In an endeavour to reinstate its vision and efforts to boost sustainable tourism and integrate environmental management in all business areas, **Taj Hotels Resorts and Palaces** presents **EARTH** (Environment Awareness & Renewal at Taj Hotels), a project which reiterates the conscious effort of one of Asia’s largest and finest group of hotels to commit to energy conservation and environmental management. EARTH has received certification from Green Globe.

**II. The Welcomgroup Hotels**
"Welcomenviron" is the name of the environmental awareness Program implemented in Welcomgroup subsidiaries and serves as the basis of the hotel's Environmental Program. This program is based on **cleaner production principle**, process modification; recovery, reuse and recycle. The "Welcomenviron" policy and procedures has assisted management in developing the hotel's Environmental Action Program. In order to facilitate implementation and monitoring which includes an environmental management "road map", life cycle analysis flow charts and monitoring checklists for all action areas; i.e.

i. Operations and facilities management: Emissions, noise, dust, effluent, solid waste, hazardous materials, machinery specifications, energy, transport, ozone layer depleting chemicals, legionnella prevention, discontinuing use of asbestos;
ii. Product services: Packaging materials, product specification, supplier performance using recycled materials

iii. Environmental awareness: Awareness and training, environmental committee, publicity, library;

iv. Communications: Corporate image and public relations, internal communications;

v. Information systems: Environmental management records and environmental legislation register.

III. Leela Group Hotels

Targets have been defined in units for Energy, Fuel & Water consumption. The monitoring of the daily power consumption in various hotel areas like Laundry, Kitchen, Banquet halls, Bakery, A/C plant, Cold Storage, Administration block, Cooling tower and make corrections if required. Internally: Monthly details of heat/light/power consumption with breakup for kitchen & laundry are put up in staff cafeteria, for all to see and to renew their efforts to reduce them. These are discussed in the management team meetings, energy conservation meeting and staff briefings. The flagship property is ISO 14001:2004 certified which is an Environment management System. Other units also follow similar standard.

IV. Ecotel Hotels

Ecotel in India is complying with all five requisite norms for Hospitality Valuation Services International's ECOTEL certification: Solid waste Management, Energy efficiency, Water conservation and preservation, Employee education and Community Involvement. Technically speaking, the passive energy conservation efforts are well thought of in the design. The focus point of the parabolic shape faces the northeast, hence reducing the direct sunlight thereby reducing electricity consumption by way of lesser air conditioning and lighting. A false wall and double glazed windows further help in considerably reducing the energy requirement. Stringent quality control and a passionate awareness in terms of preserving ecology are evident throughout the operations at every level, and regulated by an international authority. Following ecotel hotels have implemented BEMPs as discussed in a foregoing sub-sections:

- Acron Regina - Goa
- Bhaskar Palace – Hyderabad
- Baddi Himachal - Pradesh
- Ceebros Hotels - Chennai
- Gables Hotel - Shimala
- Ganga Orchid - Bangalore
- Ginger Hotels - Agartala, Trivandrum, Pondicherry, Baroda, Bhubaneswar, Durgapur, Ganga Bhubaneswar, Ginger Pune, Haridwar, Nasik, Pune, Mysore
- Hakones Bar - Thane (Hiranandani)
- Hiranandani Hospital - Powai
- "O" Hotel - Pune Koregaon Park
- Oxford Golf Club – Pune
- Regency Inn - Goa
- Simsam Hotel - Katra Jammu
- Winchester Restaurant - Hiranandani
Besides afore given list of prominent hotels, there exists a big list of hotels & resorts in India implementing BEMPs. It is not possible to provide such an exhaustive list here due to time & space constraints.

Conclusions

As the concept of implementation of BEMPs is almost a decade old in India, however, it has picked up momentum recently due to government initiatives, growing awareness & changing attitudes of mid & top level hotel management staff towards the implementation of the same as matter of business strategy. Transfer of the international BEMPs experiences to other Indian Hotels and Resorts is well underway. Other Indian hotels, including major hotel groups, have made the commitment to adopt an EMS & green globe certifications.

As today’s internationally known best practices become “common practices” in the Indian hotels, the role of organizations like Indian Hotel Industry become even more important in researching and analyzing new technologies, products and staff practices to feed the continuous improvement cycle. Combining the competitive nature of the industry that recognizes leaders, and the cooperative spirit of hoteliers helping each other solve common problems in same tourism destination make for powerful forces in optimizing the environmental performance of Indian hotels.

There is an urgent need to replicate the international & national experiences of BEMPs not only in the remaining organized but also in unorganized hotel industry of the country. The environmental monitoring & standards should be developed for the monitoring of environmental performance indicators. Research studies for environmental performance indicators of the entire hotel industry should be initiated in order to bring more innovations in BEMPs. Successful implementation of BEMPs in all domains with environmental aspects & impacts in Indian hotel industry will not only make same more sustainable but also globally competitive.

References


Websites of Hotel Taj Group, ITC- Welcome, Leela Group, Ecotel group of hotels
Promise of village tourism in the rural poverty alleviation and sustainable self employment
- The Nepalese experiments
Kamal Kant Pant

ABSTRACT
This paper traces the history of tourism in Nepal from the Royal patronage in early 1950’s, passing through the hippy days in the 1960’s and 1970’s, trekking and mountaineering expeditions in the 1980’s and looks at the present situation of tourism growth, when Nepalese villages have started receiving a small share in the national tourist arrivals. Though the number of tourists in villages is small, but it has a tremendous potential for poverty alleviation through sustainable employment. The paper provides an insight into modalities of management tourism villages through collective decision making.

The paper studies three experiments in village tourism, which have worked in different areas of Nepal. The oldest is the Annapurna Conservation Area Project (ACAP), which was introduced in 1986 primarily for conservation of environment and capacity enhancement of the inhabitants around the Mount Annapurna and mount Dhaulagiri mountain range, which is probably the most popular trekking route in the world. This area covers multiple, but adjoining districts. The project has not only won accolades for conserving one of the most fragile ecosystems, but has set standards for conservation and sustainable use of resources through community empowerment and participation. This project came up under the aegis of the National trust for Nature Conservation with international donor support.

The second project - Sirubari village came up in 1997 in Syangja District in the western development region of Nepal. The distinction of the project is that there are hardly any foreign donors agencies involved and is the brain child of the native residents, notably Capt. Rudra Man Gurung, who represented the region in the national parliament. Sirubari after a decade of its inception holds the place of pride among all the villages in Nepal as a model village not only for village tourism development but for conservation, high standards of living for the villagers, high level of education amongst the youth and health care awareness. The last project was introduced in 2001 was called Tourism for Rural Poverty Alleviation program (TRPAP); this was launched in six remote and distinct districts of the country. These districts were chosen based on the existing tourism development and its potential, and the extent to which significant elements of poverty and marginalized social groups were in need of support.

By developing linkages with the rural communities, the program encourages and involves people at the grassroots in the decision making process, to help ensure that benefits from tourism can reach them directly. The focus of the program was always towards the disadvantaged stratum of rural people who live below the poverty line. The program was phased out in 2007 as a project with international funding, but village tourism continues. The monitoring of the project is being given to the Nepal Tourism Board. But the presence of some of the products developed by this project in the catalogues of many a tour operators speaks volumes about its success.

Key Words: Village Tourism, Rural Tourism, Poverty alleviation, Pro-poor tourism, sustainable tourism, Alternative tourism.

INTRODUCTION
Nepal was one of the forbidden kingdoms of south Asia until 60 years ago under the then regime of the Rana Prime ministers, who without holding the title of the monarch had the absolute control over all the state powers. The total number of foreigners allowed to enter Nepal (or Katmandu) could have been counted on the fingers of a single hand. Under such a situation, existence of tourism as an industry could not be imagined. This regime was toppled by a popular movement in 1951 and rule of the Shah Kings was reestablished. Soon after this change of regime with King Tribhuvan taking the reins of the government, tourism became one of the priority sectors in the national planning. Many a private sector enterprises entered into tourism business with remodeled places into grand hotels and tour operation companies, mountaineering, big game hunting expedition companies and the like. Majority of them were from the elite class, some even related to the royal families of the Shah or Rana regimes. The successful scaling of Mount Everest in 1953 made Nepal popular as the land of the Himalayas doing free publicity for Nepal Tourism.
This trend more or less continued in Nepal for almost two-three decades. The general feeling of the masses was that tourism is all about wealthy people from overseas visiting Nepal to be welcomed by the elite of Nepal in their new style palaces called hotels now, who took them around in their royal car cades to engage in the royal sports like elephant polo and big game hunting. The common man hardly fitted into this picture barring the exception of some lucky lad getting employed as a bearer or kitchen help in some of the hotels or a poor woman getting employed as a gardener or a maid provided they caught the fancy of the owners of these hotel or resorts. Many a managers and chefs were expatriates, with second level staff from India.

The trends fortunately changed in the 1970’s due to influx of hippies in Katmandu, who demanded inexpensive lodging, board, seclusion and uninterrupted supply of Marijuana. Suburban Katmandu was more than ready fulfill this demand of theirs. Due to this phenomenon occurring, the tourism came out of the monopoly of the elite in Katmandu. But out of Katmandu, the situation did not see much change. A few tourist spots like Pokhara, Palpa and Chitwan developed primarily by the business people from Katmandu encouraged by their success back home. Similarly mountaineering and trekking expeditions were coordinated from Katmandu to various parts of Nepal without any earning for the places visited in the first place. On the contrary the places visited got environmentally degraded by the unsustainable practices by the visitors and their agencies. To take the example of Annapurna Base camp, it is even called the highest dumping site in the world, with heaps of bottles, empty food cans, oxygen cylinders, packaging material, toilet paper and human feces. The plight of other popular trekking and mountaineering routes is slightly less distressful because of comparatively less traffic in such areas.

The trend showed signs of change post 1980’s along with the greater global awareness about sustainable tourism and its cardinal principal of community participation and sharing of the benefits of tourism by community rather than individuals. The government of Nepal at that time and the team of policy makers and national planners deserve the credit for introducing the winds of change that swept the Nepalese tourism sector. Let us take a look at the daunting task that these people had at hand. At that time, Eighty percent of the population of Nepal lived in villages (it still does). Most of them were dependent on agriculture, but they produced only a third of Nepal’s Gross Domestic Product. What it meant was that majority of population in Nepal was underemployed in agriculture due to its seasonal nature. The only respite to the youth in Nepal, with their increased level of education and awareness was to abandon their ancestral villages and migrate to urban areas, complicating the already difficult situation of the urban poor.

Under such a situation, rural tourism and village based tourism along with cottage industries; food packaging industries were identified as a viable option for off- farm employment in the villages by the government to wean off youth from migrating to urban areas and retain them in the rural areas with promise of full time gainful employment. Financial and technical assistance was sought from the donor agencies from developed world to chalk out a development plan for such tourism. The following are some of the examples of the outcome of these efforts.

**Annapurna Conservation Area experiment (ACAP)**

The following map shows the area under Annapurna Conservation Area and its location on the map of Nepal.
The foundation for village tourism in Nepal may be argued to have started with the establishment of Annapurna Conservation Area Project in 1986 under the aegis of then King Mahendra UK Trust for Nature Conservation, (now national trust for nature conservation). The primary focus of the project was conservation of the environment and development of the community in the area surrounding the Annapurna and Dhaulagiri mountain ranges with the massifs of Annapurna –I towering 8,091 meters and that of Dhaulagiri at 8,151 meters. This region has been the most popular trekking region in Nepal. It is visited by around 70,000 foreign tourists. Tourism development in the villages of the area emerged as a byproduct of the projects (ACAP’s) efforts. The need for conservation in the first place started because the treks of these areas were predominantly organized by the trekking agencies, who tried to give all the comforts to the trekkers, en-route by making an army of porters, cooks and camp pitchers and the like move ahead of the trekking group. Such agencies relied a lot on convenience food and produced a lot of litter in terms of packing material and left over food and other materials. It was estimated that for every trekker in the Annapurna region, there used to be more than two such support persons.

With the persistent efforts of the ACAP, not only did conservation effort take place with –regulations like ban on beer and mineral water bottles, polythene bags and other non-biodegradable stuff, but the people of the villages have were empowered by education and
making new technologies like the solar heating, improved wood burning stoves, energy salvaging devices, solar power generating panels available with subsidies and easy payment options. These efforts have transformed the role of the villages from dumb spectators of the tourism around them to the ones actively participating in the activities by opening their houses for lodging; if not, then to make a meal or tea available to the tourists. This phenomenon has given birth to a new concept of trekking, which is now being called ‘tea house treks’. Tea houses are the village houses en-route popular trekking routes which offer boarding and lodging facilities to the trekkers. A large no of such facilities exist now in the entire ACAP region and are very popular with Nepalese student trekkers and on budget young foreign trekkers from countries like Holland and Israel. The contribution of these establishments in the conservation of the environment is immense, as these people are using indigenous resources in a sustainable basis and retaining most of the expenditure done by the tourists in the area.

The villages of Ghalegaon, Sikles and Dhampus; which have adopted Sirubari model of tourism by aspiring to be tourism destinations in their own right are situated in Annapurna Conservation Area. Tourism in these villages has been well documented and appreciated by national and international media and tourism organizations. But the true success of ACAP is in the fact that every trail is the region is equipped with tea houses equipped to provide decent lodging and board to a tourist. With the presence of such establishments, the tourism carrying capacity of this region has increased many folds. The retention of tourism earning in the region also has increased many folds and with the multiplier effect the entire community is improving its standards of living. The destinations don’t need any publicity as most of the business comes as the word of mouth publicity.

The Sirubari experiment:

The birth of village tourism in the real sense took place in 1997 with the emergence of Sirubari model village, a beautiful hamlet in the western Nepal. The village is about 250 Km from Kathmandu, and 40 km west of Pokhara, on the Siddhartha highway connecting Pokhara with the Indian border town of Sunauli. The village is still not connected by road; the tourists have to reach the village after hiking for two-three hours from the highway. But this hike is a blessing, as the way is replete with picture postcard scenery of the Himalayas and Shivalik ranges of mountains. The welcome one gets after reaching the village is one of the highest points of the Sirubari experience. This is done with the entire village community gathering at the entrance of the village with their traditional musical instruments, to welcome the tourists with beautiful garlands made with flowers. The tourists are then ushered into the village and individual houses with folk dancers and singers leading the way. This is the welcome by the community. Once the tourist reaches his host’s house then another welcome starts with home brewed millet wine and dried meat snack.

This was the first village which had the primary objective of developing the village as a tourism destination, other objectives like conservation, development etc were on the sidelines of the project which was supported by Rural Tourism Promotion Project but implemented by the community itself with the leadership provided by Capt Rudra Man Gurung, who also represented the area in the national parliament. The elderly men folk in this village are predominantly retired soldiers of the Indian and British armies. The strength of the village is the culture of cooperation prevalent in the group of elderly ladies (popularly known as Mothers’ group) who
democratically find solution to every conflict and difficulty that arises in the tourism village’s affairs is another reason for the resounding success of this village.

Sirubari today receives a few thousand foreign visitors predominantly professors in social sciences and their students who use this village as a social laboratory and a few elderly visitors from the west who wish to experience real Nepali village life from close quarters. But as far as domestic tourism is concerned, it is amongst the most popular destinations in Nepal. There are hundreds of officials from rival villages, who come here to study the Sirubari model of village tourism. The other clientele include students studying tourism and hospitality management programs and business management students who learn about dozens of micro business management models in every household of the village. But the signs that Sirubari is expanding its appeal beyond the market segments mentioned above are evident. It holds a huge potential for greater appeal to other leisure tourism market in the country.

Sirubari is an inspiration for many villages in Nepal, as it has harnessed the potential of tourism for its development. The education, sanitation, health care and standard of living of the people of this village have improved considerably in the fifteen years of the existence of Sirubari as a model tourism village. The participatory tourism village management model has been well documented, studied and replicated in many a places in Nepal and abroad. This village also received a PATA gold leaf award in 2001 under the CD-Rom category for promotional material. It is featured in the promotional material of almost all the tour operators of Nepal. The village is gradually upgrading itself to enhance its capacity from the existing accommodation for 100 tourists at a time. It is planning to add meetings facilities too to attract the other lucrative segments of tourists.

TRPAP Project Area (Tourism for Rural Poverty Alleviation Program)

The following map highlights the areas where TRPAP project functioned. The light areas are in the high mountainous region of Nepal; whereas the dark areas are in the plains and low hills. This map also includes the area covered by ACAP, Mustang, Manasulu and Dhaulagiri which were not under TRPAP.

TRPAP represents a very important pilot program, aimed at achieving the single key strategic aim of poverty reduction through tourism adopted by the Government of Nepal in the ninth five year plan. TRPAP was implemented by Ministry of Culture, Tourism and Civil Aviation with technical and financial assistance from UNDP, DFID and SNV/Nepal. TRPAP aims were to
reach out to some of Nepal's poorest rural areas by developing, promoting and marketing rural tourism. Being a community-based tourism program, it used tourism as a vehicle to reduce poverty. It was launched in September 2001 by Nepal government with the technical and financial assistance from multiple donor agencies mentioned above. The Project was designed initially for four years and later extended by two more years. After that it was made self-sustaining and the monitoring and facilitating part, was handed over to Nepal Tourism Board (the National Tourism Organization) under the Sustainable Tourism Development Unit (STDU) constituted in it. The strength of the project was the firm support of four pillars on which it chose to rest. These four pillars were: Pro-poor, pro-community, pro women and pro-environment efforts.

The program operated in six pilot project sites in six different districts of Nepal, which include altogether 48 Village Development Committees (VDCs) covering 160,732 people from 28,337 households. These districts were chosen based on the existing tourism development and its potential, and the extent to which significant elements of poverty and marginalized social groups were in need of support. These project sites surprising were in close proximity of the star tourism destinations of Nepal like Lumbini in Rupendehi district, Dolpa in Dolpa District, Solu and Sagarmatha (Mt. Everest) National Park in Solukhumbu. Chepang hills in the Chitwan district, Gatlang in the Rasuwa district and Langtang in the Langtang national park- the third most popular trekking destination in Nepal.

By developing linkages with the rural populace, the program encouraged and involved grass root level people in the decision making process, to help ensure that benefits from tourism could reach the rural poor. The focus of the program was always towards the disadvantaged stratum of rural people who live below the poverty line. TRPAP used seven different approaches for tourism development in the six districts that it targeted, based on the socio-economic conditions and attitudes of the community towards strangers and the idea of housing them in their own houses.

One model which has proved to be quite successful is in Gatlang village of Rasuwa district adjoining Katmandu valley. This place falls on the newly developed ‘Tamang Heritage trail’ by the project. The problem in Gatlang was that the villages there were so poor that their houses were too small to accommodate their own family, leave alone sparing some space for tourists. In such a situation, the concept of development of a community lodge was brought up by the project. It was developed in the middle of the village by the financial assistance of TRPAP and the District Development Committee, Rasuwa and voluntary labor donated by the villagers. The community lodge has the arrangement for modern accommodations for the tourists, dining hall and kitchen and a courtyard to showcase the community life and culture to the tourists. Microfinance was made available through the project to the village folk to grow fruit and vegetables and to rear livestock for milk, meat and eggs to be consumed by the tourists. Moreover, soft loans were extended to the interested villagers to add space and to upgrade the sanitation standards in their houses to accommodate tourists over a period of time. Once sufficient accommodation is created in the village by this effort, Community lodge being used to accommodate tourists now would be converted to a Tamang museum to add to the attractions of the village.

The other model adopted by the project in other areas like Solu and Sagarmatha (Mt Everest) National park area where people were comparatively well off with decent housing. These are amongst the top tourism destinations of Nepal for entry into the Mount Everest base
camp and some of the most prominent Buddhist monasteries. But the problem with the target areas was that in spite of being in close proximity to the world famous spots like the Mount Everest, the communities living here were not deriving any benefits from tourism. It was a classic case of ‘so near and yet so far’. In these areas new trekking routes were developed and finance made available to the interested people in the villages to add or upgrade a room and bathroom to accommodate a tourist. This was augmented by training of the villagers in entrepreneurial skills, hygiene and sanitation, waste management, conservation, cultural differences and attitudes of the tourists. The tourists were motivated to take a detour and spend time off the beaten track to acclimatize them to the high altitude environment.

Today, the rural tourism in most of the targeted areas in still going strong through the active participation of the communities though the coordination by the donor agencies has stopped since 2007. Almost all these destinations find a place in the brochures and websites of the leading tour operators of Nepal with a few also in the brochures of the tour operators in Europe and other markets.

Pre requisites for village tourism

With the popularity of tourism in Sirubari, Ghandruk and similar villages, people all over Nepal got interested to develop their own villages as tourism villages so much so that each political party had to include a promise to this effect in its manifesto and each aspiring candidate had to commit that he will make at least a few villages in his constituency as model tourism village or at least get all the studies done to that effect. Unfortunately, village tourism does not happen by wishful thinking. It does not get successful in any rural setting. The preconditions required for any tourism destination, also apply to tourism villages. They should have a tremendous attraction to interest the tourists besides having the remaining three A’s of accessibility, amenities, and accommodation.

Tourists’ attractions- scenic, cultural, natural, etc is the primary requirement for a village destination to be successful. It the case of Sirubari, Siklesh, Ghalegaon, Bandipur etc, attractions of all the before mentioned kinds are available in big measures. For accessibility the proximity of these villages to Pokhara, a major tourist hub and the second popular tourism destination after Katmandu is a huge advantage in their favor. The fact that these villages are not accessible by cars and the final access is to be made with a trek is like an icing on the cake, it prepares you for what to expect during your stay or rather raises your expectations during your holiday. These treks are not at all difficult and therefore a person visiting any of these village destinations gets the feel of trekking in Nepal as well. If a particular village does not have the advantage of beautiful landscapes, it can still aspire to get tourism provided there is a presence of a brand- a person, historical event, community, product or a practice of the region. This is the case in Lumbini, where the village tourism revolves around the life of Gautam Buddha. If the village boasts of being the birthplace of some national hero like a noted artist or a freedom fighter, the village could use that as an attraction and build the products around that personality. The poetry of such a celebrity could be recited every evening during the cultural shows, when the tourists are in the village, the life of that person could be portrayed in a drama and so on. This when complimented with folk music and dance performances by the village folk makes it an attractive package.

For accommodations, there should be an opportunity for the tourist to put up in the home-stay accommodations with the village residents. The design of these accommodations should be
such that a tourist can decide as to how much interaction he wishes with the host family. From the hosts’ point of view, they have to be always keen to welcome tourists in their space with open heart. This is a matter of cultural disposition. In Nepal, some communities have been observed to be very adapting to this system, whereas in others they feel suffocated to feel a stranger in their homes. But with experience people get accustomed to this and start taking it naturally.

The next important precondition is Security and relatively high standard of living of the community. The villages where people live in abject poverty, with little sanitation facilities or threat of attacks from mercenaries, cannot attract tourists at all. The basic physiological needs of the tourists have to be met. No tourist braves his health, safety and wellbeing for a holiday experience. In village tourism all tourists live in the homes of the villagers as a paying guest. They eat, sleep, bathe and interact with their host families. Every host family must have a decent accommodation, a spare room with a private toilet and shower for the tourists preferably with a private entrance and running water. Ability to communicate with the tourists by at least a member of the family is also important. Workable knowledge of English or any other language which is spoken by the majority of the tourist visiting the village is a must for some of the members in the village.

Strong and transparent management practices and community feeling amongst the population with good leadership is the next important element for the success of village tourism. An enterprise involving high number of people of a village gives rise to umpteen numbers of conflicts. There are instances when only one household in the village has tourists but the entire village has to put up a show of their social life to the tourist. In the absence of transparent management and distribution of the income generated from tourism and strong community feeling and leadership in the village, it is not possible to keep everyone motivated to contribute his/her best.

Village tourism may be called a micro tourism enterprise. It is not possible for villages to market themselves as a new hotel or a tourism destination would be able to do. In the international and even national advertising jungle, villages cannot promote themselves, therefore marketing effort at the international, regional national, and local level by governmental, non-governmental and cooperatives level is desired. The patronage of national tourism organization (NTO) or the tourism department of the national government will prove to be most suitable to sustain such villages initially.

**What you get and what you don’t in village destinations**

Village tourism is different from mass tourism in the sense that one cannot expect vast public spaces, piped music, variety of dining options (with exotic ingredients flown in from around the globe), business centers with latest gadgets and fast communication facilities, running hot and cold water in the bath, swimming pools, health club or many shopping options in the village destinations.

What is available is the opportunity to live with a family as a paying guest, to listen to the traditional folk music, to sample the ethnic food prepared for you, which is the special day fare for them; observe the process of cooking and the importance of food and its partaking in their culture, to experience a few days of their life, observe their family structure and bonds, see how the family hierarchy exists and functions through their sparse communication, speak with them and discuss their life and the philosophy directing it, observe and participate in the folk music
and dance forms, which are showcased by them. This often depicts the traditional wisdom, values and beliefs of the hosts and is wonderful learning experience.

For recreation, there are umpteen numbers of outdoor opportunities for walks and sightseeing. There are the Himalayan ranges which change the hue with the journey of the Sun during the day. Mountain ranges, which are green, blue or a hue in between depending on how much sun they get during the day. There are plantations of coffee; orchids of orange, apple, there are opportunities to see gigantic bee hives on the cliffs. (Twice during the year in the honey harvesting season, it is possible to see incredible honey hunting activities of the people with no use of modern bee keeping tools and equipments.) One can even go to natural springs, waterfalls, mountain streams and rivers and even engage in fishing with the traditional methods.

There are opportunities for leisurely walks through the village, kite flying, a game of volleyball with the youth of the village, or playing the traditional board games like Baghchal with the elderly – a board game, somewhat like chess, with only two kind of pieces instead of 6 in chess and probably so much less complications, Kaudi or chopad, which is somewhat like the game of Lido but with 7 shells being thrown instead of a dice. The other opportunities are to learn the traditional skills of people used in making handicrafts.

**Modalities for village tourism**

The foundation on which village tourist rests is that the money paid by the tourist for home stay in the village does not go to the house which lodged the tourist but to the community. It is redistributed to the cultural group, welcome party etc along with the host family because all such parties make the stay of the guest enjoyable in the village. The first element for the success of village tourism in any village is the willingness of the community to incorporate it in their way of life. Like any other activity, village tourism also is a mixed bag for benefits and costs, challenges and opportunities. Once all the people have conviction to imbibe it, they have to make a general body of the village and on voluntary basis make the inventory of all the space in every household, which can be spared by them and made available for the tourist to stay. In most of the cases, the space will have to be upgraded to the acceptable standard for an international traveler by addition of an attached bathroom with shower and a commode.

In the next step a village committee must be selected by the general body of all the inhabitants of the village amongst themselves. This committee should be well represented and should be of a size which facilitates frequent meetings and decision making. This committee has to play a supervisory role when the tourist start coming to a village. Therefore highly committed people should serve on it. In case of a village which is well spread out, there could be more than one such committee to take care of clusters of houses in the village. All such committees have to select a small committee which is called Tourism Development and Management Committee. This committee has to play the crucial role of the go between the tourism markets, intermediaries and governmental and nongovernmental organizations and associations in the area of tourism on one side and the village committees and through them to the inhabitants of the village, who are the tourism products suppliers on the other hand.

In the beginning with no experience available with the Tourism Development and Management Committee, a tourism marketing consulting firm or a voluntary organization may be entrusted this job and this in turn may train the committee and handover all the work to them in due course. This model of village tourism management can be represented in the following model”
Future of village tourism for the third world countries

To say that future of tourism in the third world lies only in village tourism will be an abject exaggeration. Village tourism or any other form of alternative to popular tourism cannot replace it. Popular or Mass tourism is where the bulk of the tourists will still come from but the segment of tourism market, which is well traveled and are looking for unique kind of cultural experiences, will opt for this kind of tourism. This particular segment is very discerning when it comes to the quality of the holiday experience; they are not too particular about the frills but focus on the core product. The advantage of the patronage of this group is that there is not much promotion to be done by the destination after that, mass tourism generally seems to follow such tourists.

Village tourism or any other type of alternative tourism, which is different from mass tourism is not only a matter of choice but a mere necessity for the countries in the third world, which face the vicious cycle of poverty- due to lack of capital for investment, in its absence, there is lack of earning opportunities, which further leads to no investment and so on. In such a situation, village tourism may offer a solution. With very little investment in home improvement of villagers and a little preparation, they can start receiving tourists. It is also the sustainable model for tourism, tourism in the past has been a feudal kind of a business with benefits going to only to the elites of the society. This has often led to conflict amongst the segments in the society. The people with nothing to do with tourism always accused the tourists and tourism entrepreneurs of exploiting their common heritage and resources for their private benefit and giving them inflation, crime and exposure to indecency from unmindful tourists for nothing.
With the participation base increasing and the benefits shared amongst one and all in the village, such occurrences are going to be few in the future.

Future of village tourism in Nepal appears to be very promising. Nepal is observing the year 2011 as the visit Nepal year. In the objective targets (called quantified targets) in the concept paper, it has been planned to disperse at least 40% of one million targeted international tourists to emerging and new tourist areas in Nepal. Such areas are predominantly village destinations. At the international level, a few developing countries like Bolivia, Brazil, China, Cost Rica, Cuba, India, Indonesia, Kenya, Lesotho, Peru, Philippines, Tanzania, Thailand and Zambia etc are experimenting with various models of village tourism. This is besides its presence in the developed world like New Zealand, Australia, France etc as wine and cheese tours, or visits to aborigines etc. The future of village tourism appears to be more credible because the impending travel revolution can become a reality with development of numerous home-stay accommodations under the length and breadth of the glove rather than mega hotels projects in clusters.

References:

Various Authors, Vision and Mission of Village Tourism, edited by Dr. Prem Sharma Published by Village Tourism Promotion Forum (VITOF) and Nepal Tourism Board, 2008.
Publicity material produced by ACAP, TRPAP and Sirubari tourism development Committee and Bandipur tourism development Committee.
Oliver Bennet, Dillys Roe, and Caroline Ashley, Sustainable Tourism and poverty Elimination study, DFID report, 1999
PPT presentation by Billington- Geotourism, National Geographic Society,
Web sites
www.chinagate.com.cn
www.ruraltourism.co.nz
www.propoortourism.org.uk
The Social and Environmental Aspects of Tourism - A Case Study of Jim Corbett National Park
Piyush Sharma, Reshma Kamboj

ABSTRACT
The importance of the environment in attracting vacation travel is significant, and as Williams (1992) states, "natural beauty and cultural heritage represent a competitive advantage" for many areas and thus straining the natural resources and environmental exploitation. The present study attempts to analyze the consequences of tourism on environment, which includes danger to flora and fauna, along with the socio cultural impacts. The case of Corbett Tiger Reserve in Uttarakhand has been studied to assess the effects of tourism on the flora and fauna in the reserve. Corbett Tiger Reserve has the distinction of being India’s first national park and the venue for the inauguration of Project Tiger in 1973. The study aims to find out about the local human population, its relationship with the wildlife at CTR as well as assess the impact of tourism on the human population & the wildlife at the reserve. With the help of data from various sources, the paper compares the tiger population in the reserve over a number of years. Based on the finding, some efforts which need to be taken to maintain a balance between tourism and environment, have been mentioned in the paper.

Key Words: Environment, Tourism, Wildlife, National Park, Project Tiger

Introduction
Tourism and environment are complimentary to each other. To attract visitors the environment must be pleasant and to enjoy the pleasantness of area visited, the visitor must help to preserve it and not to disturb its original nature. Thus, tourism and environment are two sides of same coin. The concept of tourism, as we see today, is considered as a new phenomenon but in real spirit of the world this is as old as human civilization. Traveling in olden times was difficult due to lack of proper transport facilities, safety and comfort en route. As the technology and science advanced in leaps and bounds, coupled with industrialization, it led to economic and social progress. The spread of education also fostered a desire to travel.

Modern tourism is one of the most striking phenomena and offers us an opportunity to learn, enrich humanity and to identify the goals for the better life and a better society. As an industry, the impact is manifold. Tourism industry nourishes a country’s economy, stimulates development process, restores cultural heritage and helps in maintaining international peace and understanding. The most important feature of tourism is the capacity to generate large scale employment opportunities even in backward areas, especially to women, both educated and uneducated. Another important feature is that it contributes to national integration of people who live in different regions of the country with diverse cultures and languages.

Tourism and Environment
Tourism creates job opportunities, generates revenue and promotes inter cultural relations as well as mutual understanding. Amongst the many positive but also negative impacts of tourism, it is worth noting that tourism is an economic valuable activity, an environmental stake and a social challenge. Its negative side effects on people, nature and culture are caused by transport, resources consumption and waste generation as well as bad planning, inadequate preparation and harmful behavior at the destination.

Conceptual Aspects of Environment
Environment is a very broad concept which encompasses everything around us and 360 degree surroundings which affect the human life in totality. It includes the land, water, vegetation, air...
and everything in social order, including the physical and ecological environment. Accordingly it affects the man’s ability to continuous changes taking place in surroundings and environment.

Environment is not static. It is dynamic and changes occur even if there is no human interference. The changes in the surroundings and the environment keep happening and needs to adapt himself to these changes. This is what is called is balance of nature. It is when human’s in their greed to conquer nature for higher and still higher standard of life for the ever increasing population try to exploit and interfere with nature that this equilibrium is disturbed.

In the beginning the environment of early man consisted of only physical aspects of the planet earth (land, air and water) and biological communities, but with the march of time and advancement of society man extended his environment through his social, economic and political functions. That is why it is not only this planet, but other planets like moon etc. also are being explored to see the possibility of existence of human’s race all around.

Definition

Environment covers all those circumstances which assert their influence on individual since conception to death.

‘A person’s environment consists of sum total of the stimulation which he receives from his conception until his death’. – **Boring**

‘The environment is everything that affects the individual except his genes’. – **Anastasi**

‘ The term environment is used to describe, in the aggregate, all the external forces, influences and conditions, which affect, the life, nature, behavior and the growth, development and maturity of living organisms’. - **Douglas and Holland**

(S. P. Sharma, Tourism and Environment, 2006)

Since all conditions surrounding us have influence on human life, it is his endeavor to conquer nature to see his adaptability to the changes taking place around us because of our living conditions. Pollution also is an effect of our living conditions but we need to explore possibilities to overcome these changes around us and better human life.

Environmental Pollution is as more aesthetic and physical because man wants to get away from his routine and find a place for short duration which is natural and scenic. But wherever such amenities are established, the movement of personnel and machinery becomes detrimental to the natural environment and the place loses its natural beauty being ‘scenic’. Then the tourist moves on to find somewhere more tranquil as well beautiful. Unless we exercise some kind of vigil and control over such activities otherwise, finding the safety home which can meet the needs of its visitors such as expanding range of facilities like larger car parking, restaurants, shops and toilets etc., facilities will be hard to find.

**Environmental Consequences of Mass Tourism**

Mass tourism has several ill-effects on the environment such as, causing congestion and erosion, shortage of water and diminishing image of cultural heritage instead of highlighting the local cultural background. The burning example is that of Goa, which was popular for its carnival depicting Goan culture, but it has gradually got so much westernized and transformed only to bikini-paradise. Government has now realized its ill-effects and growing cases of molestation have now compelled the tourism department not to advertise and publicize it as bikini-paradise

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87
but a paradise full of cultural heritage and wide sea-shores which had also been restricted for locals to attract the western crowds.

Mushrooming of luxury hotels and resorts in such areas restricts the availability of drinking water for local population whereas, the swimming pools are overflowing with clean water. Narrow roads and streets in certain areas like Vrindavan and Chandini Chowk, cause severe traffic problems for the local population. Though, Park & Ride concept in such areas and many developing countries are becoming popular but it does not end the problem. The recent “Auto-Expo” in Delhi had to be cut short because the crowd became unmanageable inspite of measures like Park & Ride had been taken but anything which is new and exciting will attract crowds.

**Danger to Flora and Fauna**

Souvenir-hunting can cause adverse effects on the ecological balance of a region and perhaps even greater concern is that to endangered animal species from tourism. Prolonged exposure of animals to tourists has been found to be changing the behavior of animals, and they have to be lured by various methods to attract them to the tourist’s destinations, as stated by Ms Bitapi C Sinha, Professor, Wild Life Institute of India. But such measures do have ill-effects on animal’s behavior and they sometimes become entirely dependent on human feeding and forget their hunting habits. Though several measures have been taken by the provisions of “The Convention on International Trade in Endangered Species” (CITES). But it does not contain the problem entirely and danger of extension of endangered species still remains.

**The Socio-cultural effects of Tourism**

The cultural and social impact on a host country of a large number of people, sharing different value systems and away from the constraints of their own environment is a subject increasingly drawing the attention of social scientists and planners, especially those responsible for promoting tourism in the developing countries. The impact of mass tourism is most noticeable in less developed countries, but is by no means restricted to these; tourism has contributed to an increase in crime and other social problems in many tourism destinations.

The mass tourist is likely to adapt to the local cultures, and will seek amenities and standards found in the home country or destination, while the independent traveler or backpacker will adapt more readily to an alien environment. This will be clearer from the model given by Valene Smith.

<table>
<thead>
<tr>
<th>Type of Tourist</th>
<th>Numbers of Tourists</th>
<th>Adaptation to local norms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explorer</td>
<td>Very limited</td>
<td>Adapts fully</td>
</tr>
<tr>
<td>Elite</td>
<td>Rarely seen</td>
<td>Adapts fully</td>
</tr>
<tr>
<td>Off-beat</td>
<td>Uncommon, but seen</td>
<td>Adapts well</td>
</tr>
<tr>
<td>Unusual</td>
<td>Occasional</td>
<td>Adapts somewhat</td>
</tr>
<tr>
<td>Incipient</td>
<td>Steady flow</td>
<td>Seeks western amenities</td>
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<tr>
<td>Mass</td>
<td>Continuous influx</td>
<td>Expects western amenities</td>
</tr>
<tr>
<td>Charter</td>
<td>Massive arrivals</td>
<td>Demands western amenities</td>
</tr>
</tbody>
</table>

(Source; Velene Smith, Hosts and Guests, 1992)
As a larger number of tourists travel farther to find relaxation or adventure, they bring with them their own value systems, either expecting or demanding the lifestyle and facilities to which they are accustomed in their own country. Locals come to experience dissatisfaction with their own standards of living or way of life, and seek to emulate that of the tourist. In some cases, the effect of this is marginal, as in the adoption of tourists’ dress or fashion, but in others the desire to emulate the tourist can threaten deep-seated traditions in the community, as well as leading to aspirations which are impossible to meet.

Most tourists visiting a country for the first time, may have an initial fear of contact with the locals, and experience comparative isolation – with hotels often being dispersed away from centres of local activity. Few interactions are spontaneous, especially with locals who work within the tourism industry. Language may form an impenetrable barrier to genuine local contact, and this limitation can lead to mutual misunderstanding.

A report by UNESCO in 1976 identified four characteristics of host-guest relations in tourism:
1. relations are transitory and superficial;
2. they are undertaken under constraint of time and space, with visitors compacting sights into as limited amount of time as possible;
3. there is a lack of spontaneity in relations; meetings tend to be prearranged to fit tour schedules, and involve mainly financial transactions;
4. relations are unequal and imbalanced, due to disparities in wealth and status of the participants. (J. C. Holloway, The Business of Tourism, 2002)

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![Impacts of Tourism Diagram](image-url)
Literature Review:

In India, wildlife tourism is restricted, and mostly controlled by the state and private agencies. Wildlife conservation policy does not view tourism in protected areas as a source of revenue for the local community. There are few studies which have attempted to study the direct relationship between benefits from the wildlife tourism and local support for conservation.

The common understanding of the term “biodiversity” is all the living things on Earth and the ecological processes associated with them. Vermeulen and Koziell (2002) note that, as such, biodiversity can be, and is, used as a synonym for “nature” or “life on Earth.” Often lost in discussions of biodiversity is the emphasis on the variability and variety within species, among species, and among the ecological processes, and the key benefits these bring to humans in the form of choice—both in the present and in the future.

The study on the local people’s attitude towards wildlife tourism and the impact of benefits of tourism on the local support for Sariska Tiger Reserve (STR), India, indicates that two-thirds of the respondents were positive towards tourism and support for conservation. Some of the problems are the unequal distribution of tourism benefits; lack of local’s involvement in tourism and development. There is a need to clearly address these issues, so that protected areas may get the support of local people, which may lead to sustainable development. (Nagothu Udaya Sekher, 2003)

Another research made by Recreation and Tourism, Arizona State University, states that many rural communities view tourism as an economic development strategy. This study explores the relationship between resident attitudes towards tourism and support for specific tourism development options. (Kathleen L. Andereck, Deptt, 2003)

Several studies have concluded that costs associated with conservation such as wildlife depredation of crops and livestock have negative effects on local attitudes, whilst benefits from conservation may have positive effects (Heinen, 1993; Fiallo and Jacobson, 1995; Nepal and Weber, 1995; Udaya Sekhar, 1998; Walpole and Goodwin, 2001). This suggests that, conservation policy should promote sustainable measures within Protected Areas that can give rise to benefits to local communities.

Micheal Romerli, a conservation officer of Jersey, Channel Island, UK (2002), says that the tourism can have adverse effects on environment. The finite nature of natural resources, which also serve as tourism resources, makes it imperative that their enduring and sustainable use in reconciled with the continuing pursuit of social and economic goals. Sound environment management can promote continuing prosperity in tourism industry.

While a considerable amount of research has been undertaken into effect of tourists on locals, rather less was available to tell us how locals in turn influenced the tourists. We can undoubtedly ascribe our widening acceptance of foreign food and fashions, in part, of overseas travel and quality of foreign food, service, transport and hotel facilities have encouraged us to become more demanding in the provision of these in India. Research (Gullahorn and Gullahorn, 1963) also suggested that tourists go through three stages in adapting to the local culture of their holiday environment. In the first stage, the tourists are excited by the environment and the novelty of the situation; later a second stage is reached in which the tourists become disillusioned and more critical of the environment, as they become accustomed to the situation. Finally, in what may be a slow process, they learn to adapt to the new settings and in doing so may experience ‘re-entry crisis, where it becomes difficult to readapt to their home environment when they return.
Some other studies have examined the extent to which pre-travel attitudes affect adaptability, and whether travel broadens understanding or reinforces stereotypes. The evidence suggests that the self-fulfilling prophecy is at work here; that if we travel with expectation of positive experiences, we will experience them. However, much more work is needed to explore the relationship between the tourist and the host from the former’s perspective.

Adventure travel is one of the fastest growing but least understood forms of international tourism. Its role in the economic development of remote world places and its impact on local society, economy, and the environment is not fully comprehended, even though adventure tourism has been adopted enthusiastically by many Third World nations.

The study on Adventure Travel and Sustainable Tourism, in the Peripheral Economy of Nepal, suggest that, adventure travel in Nepal and places it within the theoretical frameworks of tourism models and sustainable development. Building on core-periphery tourism theory, an adventure travel spatial-linkage model is proposed that connects Nepal's remote frontiers with the global tourism economy. Within this model, adventure tourists move through a hierarchy of travel gateways before reaching adventure destinations located among isolated, subsistence populations. This movement produces a unique structure of tourism space that in turn contributes to the formation in Nepal of regional developments such as hilltown gateways, hinterland tourism destinations, and multi-use parklands. (David N. Zurick, 1992)

Moreover, there is a lot of scope of eco-tourism in India. In case of Uttarakhal, which is largely dependent on natural resources and biodiversity, there is a lot of scope to generate foreign exchange, employment and other economic and social benefits. As suggested by, Ms Pratima Sharma, in her research on Binog Hills (2006), Uttarakhal that managed plans at the various untapped destinations in Uttarakhal could bring a change in the form of overall development of state.

**Methodology**

The present study is based on field study and observation method. Personal visit to the place was carried out and the discussions with the local people, government officials, forest officers and officials of Wildlife Institute of India. Secondary data is collected from state government offices, Wildlife Institute of India, Project Tiger and Internet. This is only a suggestive paper.

**Introduction of Corbett Tiger Reserve**

Romance with the wild in Jim Corbett’s tiger country with picture perfect surrounding, myriad species of birds, tigers, elephants and other flora and fauna inhabiting this untamed terrain region is nothing less than an introduction with this Nature’s Exclusive Paradise. A royal visit to Corbett unfolds nature’s secret as one experiences the forest species in their true abode.

Corbett Tiger Reserve, a game sanctuary of yesteryears, is now a prime area for conservation. It boasts of the most diverse terrain ranging from the grasslands to the Himalayas. The home of the Royal Bengal Tigers, Corbett National Park is part of famous and scenic Patlidun Valley. The idyllic Corbett Park in District Nainital & Pauri Garhwal of Uttarakhal is set amidst thick forests of sal, khair and sisoo trees, dense bushes of lantana and other mild creepers in the picturesque Ramganga Valley. The tiger, leopard, elephant, wild boar, chital, sambhar, gural, hog, deer, barking deer, jungle cat, jackal, hare, etc. along with 500 species of
resident and migratory birds reside in this park (Zoological Survey of India). Annually around 50,000 tourist visit Jim Corbett National Park. More than one tenth of these are foreigners.

History of Cornett Tiger Reserve

This was established as India’s first national park on 6th August, 1936, with the date on which the Uttar Pradesh National Parks Act came into force, and named Hailey National Park after Sir William Malcolm Hailey, the then Governor of Uttar Pradesh, who was instrumental in its creation. Post independence, its name was changed to Ramganga National Park in 1954 and then in 1957 to its present name of Corbett National Park, in memory of Jim Corbett, the legendary hunter and naturalist who had helped in marking out its boundaries and setting it up. With the launching of ‘Project Tiger’ on 1st April, 1973, Corbett National Park was selected as one of the nine tiger reserves, and has the distinction of being chosen as the venue for the inauguration of this project on 1st February, 1974. Corbett, which is famous for its varied wildlife and its beautiful location in the foothills of the Himalayas by the Ramganga River, has with the recent inclusion of the Sonanadi Wildlife Sanctuary to the west has grown from 520 to 1288 sq km.

The Corbett Tiger Reserve saw addition of Sonanadi WLS in 1991. In 1980 Forest Conservation Act was enacted. In a recent development, 62 hectar of forest land has been transferred to Public Works Department for construction of metalled road, just outside CTR, that is raising concerns of conservationists, already sore about transfer of 23,521 acres of reserve forest to the irrigation department for dam, reservoir and related structures. After creation of new state Uttaranchal the area under Bijnore District of U.P is no more part of CTR and the CTR area is reduced to 1288 sq.km. (Source: A.S. Khanti, Corbett National Park and Tiger Reserve, 2008)

Findings

The social and anthropological studies have revealed that people living in and around the protected areas are extremely poor and mostly belong to various tribal communities having
strong dependence on forest resources as they have all along been living almost entirely on forest and renewable resources obtained. In a sense they are part of the ‘ecosystem’ and any impact on the ecological processes has affected them.

As per the data available and collected from the Project Tiger and State Forest Offices, the population of tiger in our country is declining from the past four years. There was a significant growth in the population in the Corbett Tiger Reserve from 44 in year 1972 to 138 in year 2002; and the present populations of tigers in the CTR is estimated to be around 184 (sources; Forest Deptt., Ramnagar, Uttarakhand). The Tiger population was at peak in year 1989 with the number of 4334 in the country, but has declined to 3642 in year 2002.

The population of the tigers had also significantly increased in the Tiger Reserves in India from the past years, 268 in year 1972 to 1576 in year 2002 because of concentrated efforts in ‘Project Tiger’ which were initiated on 1st April 1973 and inaugurated by Govt. of India on the banks of Ramganga River in Corbett Tiger Reserve. The launch of project heralded the onset of scientific wildlife management in India. The increase in the population did show a positive sign that the illegal poaching of tigers had been reduced or restricted. Although there had been some cases registered by the Forest Department and State Govt., but there have been a decline in Tiger population in the Reserve lately and the case of Sairska Tiger Sanctuary was an eye-opener for all those who are concerned about the wild-life conservation in our country. Though government has taken up certain positive steps with the intervention of Prime Minister, Dr. Manmohan Singh, but still a lot is still wanted in this direction. As per the local people, the movement of the tigers in the region is not very frequent and the spotting of tigers in the Jim Corbett National Park is rare these days. One of the Official Guide to the Tiger Reserve said that earlier they used to spot tiger in every two- three days, which is now once in fifteen days or even less. Even this could be traced from the visitors entry registers available at the each entry gate of the National Park.

1. Impact on the local community in regard to employment: As the tourist arrivals to the CTR is increasing and more and more resorts and tourists lodges are being developed in the region, it is beneficial for the local people as it is generating employment opportunities for them. Villagers who own elephants and jeeps are benefitting from the tourist influx as they undertake elephant and jeep safaris, respectively in CTR. However, the employment generated through tourism has resulted in providing means of sustenance to those who are
living in or near the CTR and are no longer dependent on forests. This has led to biodiversity conservation which in turn provides pleasant landscapes for eco-tourism.

2. **Helps in encouraging eco-tourism:** In the year 2004, the National Committee on Eco Tourism and Mountains announced that Uttarakhand would be developed as a key eco tourism destination in the country. The Centre for Eco tourism and Sustainable Livelihood is being developed at Chunakhan, Ramnagar (District Nainital), as nodal institution for promotion of eco tourism in Uttarakhand.

Most of the resorts in the region are eco friendly and hence they help in conserving the natural environment. Example: - Camp Wild Adventure is one of the prominent eco friendly resorts in buffer areas in the CTR.

3. **Impact on wildlife:** As discussed with the forest officials and faculty of Wildlife Institute of India, Dehradun, it has been observed that the animals tend to change their behavior and eating habits when they are constantly exposed to tourists in the protected areas. They are often found near the tourist accommodations/camps searching the garbage dumps for food. Easily available food is affecting the hunting habits of these animals.

4. **Pollution:** The tourist season brings with it more vehicles on the road, which leads to an increase in the levels of air and noise pollution in and around the reserve. The traffic movement continues even in the night and disturbs the animal movements and activity and thus, the very basic purpose of ‘core area’ and ‘buffer area’ concept is getting adversely affected.

**Conclusion**

The richness or process, quality or quantity and above all the availability of renewable and non-renewable resources decide the type of human activities, economic viability and even the potential stability or instability and international relations. The recent past has remained a period of profound transformation as the environment consciousness of tourism industry, and all associated governance. The tourism implications are being seen in terms of socio-cultural and environmental aspects but yet a proper check on uncontrolled expansion of mass-tourism has not been very effective so far. Though, today the decisions makers in tourism industry react better to positive stimuli and strategies of sustainability in sincere align with conservation movement all around.

Govt. of India has given due recognition to tourist potential of wildlife and has made all efforts to cater to the interests of nature lovers, but the issue which still remains in the minds of environmentalists and nature lovers is that whether our beleaguered natural areas can withstand the ordeal of uncontrolled tourism, particularly the influx of trackers and mountaineers. The National Parks & Sanctuaries like Jim Corbett are part of large tourism-reaction, conservation system impact and it does make a difference when there is a massive influx due to mass tourism with uninvolved and unconcerned tourists. Capacity of the park needs clear optimization in terms of quality of visitors and pattern of resource use. Noisy visitors may cause adverse effects on natural equilibrium, due to their insensitivity. The other significant factor is tourist lodging, their location and architectural style. It is well established fact now that the core-zone should not have any more facility of this nature because it will definitely affect the wildlife habitat and the natural park vista.

Thus, in our endeavor for striking a balance between tourism and environment following needs to be done on priority:-
a) Clear demarcation of zones, first as ecological inner-liner beyond which human ingress needs to be completely forbidden.
b) Limited inflow through proper permits, which is being followed to a great extent in Corbett Tiger Reserve.
c) Availability of adequate number of trained person which presently is a great handicap. Unless this is done, future cannot hold the promise of a dynamic wholesome environment for future generations.
d) The need for interpretations centers at the entrance to the park, to provide basic nature education and orientation to the visitors as majority of them are only unconsidered khushi-time visitors. A museum at the entrance of Dhikala Gate, at CTR, is a very positive step in this direction, but visit and briefing by well trained and educated staff should be made compulsory before any entry of visitors to the Dhikala Zone and similar steps need to be taken at the other entry gates to the CTR.
e) All transports entering the park area should be battery operated and only mini-buses should be used in preference to full-size buses, which are being followed to a great extent.
f) The local population should be educated so that they can interact with variety of visitors because, though they are well acquainted with the region/area, animal behavior and local folklore.
g) Positive steps like, establishment of Corbett Gram Vikas Samiti (a non-profit organization registered under the Societies Registration Act 1860) at Kala Dhungi (Chhoti Haldwani), for running home stays program like the Bread and Breakfast scheme being encouraged in metros to cater for mass tourism, needs to be encouraged with due incentives by the government.
h) Efforts should be taken to promote local development and sharing of economic benefits in a fair manner at national, regional and local levels.
i) Empower local communities to manage eco tourism and generate incentives for conservation through alternate and additional livelihood options.
j) To increase environmental awareness of hosts and visitors so that it results in a clean, green environment.
k) Adequate importance should be given to domestic visitors as they are more affected by sustainability issues and are likely to make greater contributions to conservation in the log run.

References:

Andereck, Kathileen L. and Vogt Cristine A. (2003); The Relationship between Residents’ Attitudes towards Tourism and Tourism Developments Options.
Eco-tourism Manual (2009); Wildlife Institute of India
Holloway, J Cristopher (2002); The Business of Tourism (sixth edition)
Khanti, Anand S.(2008); Corbett National Park & Tiger Reserve
Romeril, Michael (2002); Tourism and the environment- accord or discord?
Sharma, Shashi Prabha (2006); Tourism and Environment- Concepts, Principles & Approaches.
Shekharc, Nagothu Udaya (2003); Local people’s attitude towards conservation and wildlife tourism around Sirska Tiger Reserve, India
www.indianwildlife.com
Project Tiger Report, 2003
Eco Friendly Cleaning: A Small Step can Lead to Big Leap in Future
Rachna Chandan, Sunita Badhwar

ABSTRACT
The purpose of this conceptual paper is to outline the impact of cleaning chemicals on environment, eco-friendly practices followed by the hotels and about new initiative which can create positive impact on the environment condition. The study on eco-friendly practices has experienced an explosive interest from last so many years. (Ito, 2007) However, little research has been done on commonly used chemicals for cleaning different surfaces. Accommodation is the necessary pre-condition for any tourism activity and in the face of further booming expansion, its impact on society is becoming increasingly visible. And this implementation makes the property more marketable and hopefully, more profitable.

However, the main involvement of the study concerned the highlighting of the need of using eco-friendly cleaning agents and its impact on the human being and environment. Besides this, it was argued that consumers are the most powerful external factor that has the ability to influence and demand practices, since governmental control and legislation is mostly absent in the industry. Therefore, the research calls for more attention by different organizations as well as guest and work on environment friendly practices and to find stronger incentives for going green.

Key words: environment, cleaning chemicals, eco-friendly cleaning agents.

Introduction
Now a day, every country is trying to implement the green practices which will protect the mankind and nature from the diverse effect of synthetic chemicals either used at homes, offices and factories. Therefore, many hotels have already started to use the green chemicals like lemon juice, vinegar, etc for their daily cleaning activities and few are working, to opt for them at frequent level. Green chemicals comprise natural and biodegradable substances instead of alkali and acid and are made by techniques that do not harm the environment.

Green chemicals are plant-based and do not contain synthetic and harmful chemicals and to incorporate such practices little thinking is required. It is false to believe that eco-friendly cleaning agents cannot eliminate resistant spots and stains from hard or textile surfaces. There is no compromise from the efficiency of cleaning the stubborn marks too.

And if we talk about hospitality industry and there housekeeping department, the change-over to eco friendly cleaning practice begins with very basic programs.

For its regular and smooth functioning, housekeeping department has to deal with hard water, water stains and scaling. And the easiest way out is to use detergents. But most of the detergents have high pH level, acid contents, petrochemical, chlorine, aerosol propellants, ammonia and bleach which act as a capable carcinogenic element and their excessive exposure can lead to the ailment and allergies too.

With this, these chemicals are non biodegradable, and will not breakdown at the time of decomposition. When ecological protection is the cause of the matter, bio-degradability of products used is fundamental. Alkalinites of synthetic products affects the life cycle of flora and fauna and even led them to distinction and also act as one of the major resource for water contamination. Going green with green chemicals reflects positively in the minds of customers and can actually reduce operation costs associated with hazardous material removal (Zwiebel, 2009). Most of the hotels realizes the problems of chemical-based products and have switched to environment-friendly cleaning agents. What is required is an increased level of attentiveness, and even though it might seem as a high investment proposition, in the long run it has other benefits.

Rachna Chandan, Lecturer, BCIHMCT, New Delhi, E-mail: rachnachandanrai@rediffmail.com
Sunita Badhwar, Lecturer, BCIHMCT, New Delhi, E-mail: sunitabadhwar@rediffmail.com
Many major lodging companies like Lotus Suites (www.lotussuites.com), Lemon Tree (www.lemontreehotels.com), etc have already introduced basic environmental programs. These programs help with training, finding vendors of environmentally friendly cleaning products and providing marketing support for the guest rooms and for these activities there are different training films and information packages which will help the organization to shift to environmentally friendly practices.

**Effects of synthetic chemicals**

Chemical used frequently for cleaning purpose have following effects, which must have to consider seriously by different organizations

- Chlorine present in our drinking water, swimming pool and many more is harmful for human body, if used above the concentration of 0.2-1mg/ltr. (WHO, 1996)
- Most of the cleaners contain toxic chemicals as ammonia; present mostly in all the chemicals, which if combined with bleach than it will be lethal.
- Chemicals used fordishwashing contain Naphtha, a CNS depressant, diethanolamine, a liver poison, and/or chlorophenyl phenyl a toxic metabolic stimulant.
- Most of the laundry agents contain phosphorus, enzymes, ammonia, naphthalene, phenol and sodium nitritotriacetate which can result in rashes, itches, allergies and sinus problems, if used on regular basis.
- Phenol, aerosol and similar disinfectants can cause diarrhea, dizziness, and kidney and liver problems as they contain corrosives elements
- Furniture and floor polishes have nitrobenzene which can be carcinogenic
- Metal polishes contain petroleum distillates and glass cleaner which contain ammonia and can affect the lung and can also be the cause of skin irritants
- Naphthalene or Para dichlorobenzene (moth balls) fumes can irritate eyes, skin and the respiratory tracts and can damage the liver, kidneys, skin and the central nervous system. Most of these products are potential carcinogenic
- Toilet cleaners contain hydrochloric acid or sodium acid-based and can cause vomiting, stomach burns, and even blindness if it comes in contact with the eyes
- Bleaches (sodium hypo-chloride) are an eye and lung irritant. If mixed with ammonia or acid-based cleaners, it releases chloramines gas, exposure to which may cause serious respiratory problems. (Express Hospitality, 2008)

With the above mention chemical effects on human being, these chemicals also endanger the environment by contaminating the groundwater, rivers and oceans which gave direct effect on different species of water as well as it is also disturbing the wildlife. That is not only hindering the growth of plants by forming the layer of algae, irrigated to them by different contaminated waterways but also becoming the reason of their extinction.

**What are the advantages of switching to eco friendly cleaning?**

**Towards The Environment**

Green cleaners poses no harm to the environment as they neither contain nor release harmful substances like volatile organic compounds (VOC) into the air therefore act as the most evident benefit for their use. Synthetic cleaners are extremely harmful because when they go into the air and water, they try to break-in the food chain and cause adverse affect on living beings and tend
to destroy ecosystem. Green products are deficient in irritants or abrasives, lower in toxicity and can easily biodegrade in the environment.

**Towards Human Being**

Synthetic cleaners are harmful to the health of the users. They may contain chemicals that are irritants and can cause harm to the skin of the user or give off fumes that pose a health risk. Mostly allergy sufferers- both those with skin sensitivities and breathing/asthma difficulties- are less likely to have adverse reactions to environmentally friendly cleaners Since green chemicals are made of natural materials, however, are effective in cleaning with organic approach, and moreover no side effect ,help in improving indoor air quality and reducing water and ambient air pollution, which will directly have the impact on mankind.

**Adherence to Health and Safety Guidelines**

Opting to green practices in the organization would ensure better health and environment to the employees and guests. It will not only affect the life cycle but also help in lowering the pollution level. Besides protecting our body system and the environment, green practices also help in cost saving.

**Increase Productivity and Occupancy**

"There is a whole wave with the green movement right now," said Kim Carlson, CPM and owner and founder of Cities Management, a property management company in Minneapolis. "I think customers are expecting this now. It's becoming an expectation rather than a fluffy do-gooder thing." (Gunderson, 2007) Increasing demand of green products by the customers and their awareness towards environment enforce the managers to look on the other side of the fence, where the grass just might be greener. They have to look for normal practices particularly on the transformation facade supporting the greening of their organization.

**Safer Production Processes**

Companies that are producing green products are also using environment friendly production processes. They are using processes that help to reduce the amount of waste produced and thus decrease the amount of pollution.

**Eco friendly practices used by the Hotels**

Most of the hotels are already following the under mentioned measures which will help in preventing global warming and are helpful in energy conservation:

- By using native plant that does not require additional water beyond that falls from the sky and grey water recycling system which will help in conserving the water. And if biological decomposed manures are used than it will not only help in enriching the soil but also moisture retention and thus decrease the need for additional watering.
- By grey water recycling waste water from kitchen and guest bathrooms, recycled and then may be used in gardening or in water closet of public area or guest room, which will help in reducing the use of fresh water needed for that purpose. Organizations like Hotel
big blue house, Arizona and Hotel Fairmount Southampton, Bermuda are successfully doing these practices

- Educating guest and staff about the green actions taken by different properties with the help of different tent cards and training classes, respectively, help in supporting the program, as well as recruiting and encouraging the guest and staff to take the measures towards green actions. For e.g. every member of The Orchid team from the Managing Director down to the newest recruit has a total commitment towards being environmentally responsible. At the recruitment stage they select those individuals who have the drive in them or showed concern and care for the environment.

Some of the hotels like Hotel Vintage Park using organic ingredients in their restaurants in offering the natural habitat for the human beings and also for preserving wildlife and other plants. It is the food grown without pesticides and fertilizers so having the better taste, rich in nutrients and of good quality. And if it is locally grown in the hotel, than the time from being harvested to serve is shorter and thus increased the quality.

Hotels like lemon tree, lotus suites and many more replaced paper bags with recycled, reusable bags for laundry use and to carry newspaper. With this, paper used for guest stationary, office stationary and tent cards can also be recycled or can be used of reusable material. By providing recycling bins in public area (i.e., poolside), in the kitchen, and in the back office (including one at each desk), helps in making recycling as easy as possible.

Introduction of Low-flow shower heads that uses only 1.0 to 2.5 gallons per minute. Older shower heads uses 4 to 6 gallons of water per minute. That means low flow shower heads could reduce water usage up to 83 percent. (Langholz, 2003) La Quinta Inn installed low-flow shower heads and aerating faucets in each room, resulting in a saving of $1.50 per room per month (Alexander, 2002).

Introduction of fluorescent light bulbs in an organization at various places helps in reducing the energy consumption and cost. According to the Alliance to Save Energy, fluorescent lamps produce four times as much light per watt than incandescent lamps, and they can last eight to ten times longer. A compact fluorescent light used in place of an incandescent light that is left on continuously for 12 months, all 8,760 hours of the year, will pay for itself in less than one year (Alexander, 2002). Many of the hotels as lemon tree, lotus suites are already following such practices.

Now a day’s hotels are also introducing low-flow toilets, which are better than ever. Not only do they flush better but also they come in dual flush styles so it can save even more water. They are having the capacity of 1.6 gallon or less per flush which can produce substantial savings. During a Seattle hotel water conservation pilot, an estimated $28,000/year could have been saved by replacing toilets (Baum, 2005). Waterless urinals also save a great amount of water as they use 1 or 0.5 liters. The Lenox hotel, Boston, uses waterless urinals that save 180,000 gallons of water annually.

Instead of washing guest room linen on daily basis, different properties are washing the linen when guest checked out/requested by the guest/on alternative days (this can either be decided by the organization or by the regular opinion of the guest). This is the way of reducing the water and energy consumption involved in washing sheets and towels daily. When housekeeping complies with this "rule" it saves resources, time, and wear and tear on the sheets
and the towel. With this, instead of using cotton and synthetic fabrics if organic cotton fabrics are preferred than that will be better as there are no petrochemicals used in them.

**Environment friendly cleaning agents**

- **Vinegar**—it is a fermented ethanol and is preferred in bathroom and kitchen cleaning, or can be also used as fabric softener in laundry and if used with warm water than can be the excellent cleaner for glassware and window. The chemicals which we are using in cleaning the kitchen, bathroom, windows, and glassware or as fabric softener may contain Alpha- terpineol, Benzyl Acetate, Phenol, Ammonia, Benzyl Alcohol, Camphor, Chloroform, Ethyl Acetate, Limonene, Linalool, Pentane etc. According to the manufacturers' Material Safety Data Sheets, these chemicals have the potential to do things to human being such as:
  - cause central nervous system disorders, headaches, and loss of muscle coordination;
  - irritate mucous membranes and impair respiratory function;
  - cause nausea, vomiting, dizziness, or drowsiness;
  - cause liver or kidney damage;
  - cause skin disorders and allergic reactions;
  - Cause cancer.

- **Lemon juice**—it is a very good toilet cleaner, smells fresh and is free from airborne toxins. It can be used against hard water marks and deposited soap scum or to clean metal and wood surfaces. Lemon peel can be also used as a very good and natural air freshener. Normally the chemicals used at commercial level contain hydrochloric acid, a highly corrosive irritant to both skin and eyes that damages kidneys and liver; and hypochlorite bleach, a corrosive irritant that can burn eyes, skin and respiratory tract. If came in contact with other chemicals may cause chlorine fumes which may be fatal. (Siegel, 2008)

- **Baking soda**—it is white crystalline sodium bicarbonate and is act as the best abrasive cleanser and deodorizer, and is preferably used in the kitchen. It is low in toxicity and forms a "detergent" which reacts with grease and oil. The chemicals which are used on high rate in the industry are very harmful for the human being as they contain ammonia and some corrosive alkaline substance which can affect the respiratory system and can act as the skin allergic substance. (Siegel, 2008)

- **Borax**—it is a natural occurring mineral also named as sodium borate and can be easily dissolves in water and is a wonderful cleaner! It helps in dissolving grease and removing stains and is also work as disinfectant, deodorizer and inhibits mould. It can also be used as a water or fabric softener. The cleaning products available in the market contain chlorine in a dry form that is highly concentrated and is harmful for mankind. (Beach, 2009)

- **Soap flakes**—they are the pure translucent flakes of vegetable oils and purified water and are biodegradable low toxic and unlike detergent, do not contribute to algal blooms in rivers. As detergents are neither soluble nor biodegradable and once put into water, they tend to remain there, resisting breakdown. (Siegel, 2008)

- **Eucalyptus and tea-tree oil**—naturally scented disinfectants—add to hot water but can also be used neat as they are good for removing sticky goof off surfaces. Air fresheners
available in the market usually contain formaldehyde, which when come in contact of the skin can cause it to swell, burn, peel and break out in hives. (Siegel, 2008)

- Washing soda- consisting of sodium carbonate (moderate alkaline) washing soda is useful in the kitchen for cutting through grease. Also removes stains and softens water. Most of the cleansers used for cleaning purpose contain include perchlorethylene, extremely irritable to eyes, skin and respiratory passages. (Beach, 2009)

Conclusion

This paper has outlined the impact of cleaning chemical on environment, eco-friendly practices following by the hotels and about new initiative which can create positive impact on the environment condition.

There is undoubtedly a great need for education and increase in environmental awareness among the general public. Hotels have the potential of becoming significant venues of such education as they are exposed to the traveling public, a rapidly increasing portion of the world's population (Bohdanowicz, 2003). Green practices will help hotels to save lots of money and can increase their occupancy as today guest demand “green alternatives” that makes hoteliers motivated and willing to take steps towards greater environmental responsibility. Hoteliers do have environmental knowledge and most of the hotels have started measures that can be taken to save our mother earth and are profitable for the organizations but still they need to put more efforts. Only meetings related to the environment issues will not help in saving our planet but strictly have to follow the practices. No doubt it’s very tough to change the operational practices that will turn costly in the beginning but in the long run the environment friendly practices will reap good profit. Let us follow the example of the valuable role models, such as Uppal’s Orchid, Kimpton Hotels and Restaurants who have shown that eco-friendly practices are profitable. Even now all countries has woken up, summits like Copenhagen has proved that it’s now time for action rather than talks so why not the hospitality industry should contribute to save our planet.

Recommendations

By following simple practices, as
- Setting out recycling bin
- Asking guest to switch off the lights while leaving
- To ask guest if they would like to clean room when required or after they check out can work as the beginning towards safe and sound environment.

These steps are simple, and are less costly than many other green approaches, and they do make a difference in developing a green hotel. A very important factor in becoming green is to realize that, while some steps may be small, none are insignificant. This small initiative taken by the hotel can be helpful in saving global warming issues and can also be appreciated by the guests because travelers are equally aware about the changes going in our environment and their after-effects.

As the above mentioned aspect of lowering the cleaning cost from the regular cleaning procedure, is one of the colossal field and to find out its further extension, we are immensely working over it.
References

Alexander Sarah (2002), Green hotel: Opportunities and resources for success
Green Tucson Hotels, resorts and B&B’s/www.visittucson.org
Grinning planet/www.grinningplanet.com, updated June 2009
Hotel Vintage Park/www.hotelvintagepark.com
Langholz Jeffrey and Turner Kelly (2003) you can Prevent Global Warming (and Save Money), pp-30
Lemon tree/ www.lemontreehotels.com
Lotus suites/ www.lotussuites.com
Orchid hotels and restaurants/www.orchidhotels.com
Project Planet/www.projectplanetcorp.com
Siegel Karyn-Maier, the Naturally Clean Home: 150 super easy herbal formulas for green cleaning (2008), pp-31, 37, 70-80, 90-93, 102.
The Lenox, Boston/www.lenoxhotel.com
Zwiebel Lauren (2009), An Introduction to Green Chemicals for cleaning, 7th September 2009/www.ezinearticles.com
The globalization process has unquestionably stimulated technological progress, productivity, growth, and enhanced living standards; however, it has also intensified social and economic imbalances in certain parts of the world, as well as harmed the earth’s ecosystem.

Tourism and Sustainability

Our Hospitality Industry is a fast-growing sector, and I do believe that this is a major factor in accelerating the globalization process. This means that the Hospitality Industry will have a great influence this year and next year on the environment and also will have a great responsibility to protect it.

Sustainable Hospitality can be achieved when developing processes are designed on a long-term basis, encouraging environmental and social responsibility, as well as higher economic productivity.

To secure long-term developments, we should start by this year and definitely by 2010 to adhere to sustainable tourism on the basis of the United Nations Millennium Development Goals, such as climate change and poverty reduction.

Hotels that do not respect sustainable principles run the risk of incurring a loss in clientele. Meanwhile socially-responsible and environmentally-friendly managements will see an increase in business. Even during times of financial uncertainties, sustainability is an opportunity to stimulate economic development in our sector.

Moreover, the hotels that implement as soon as possible and certainly by 2010 a sustainable principle will be better positioned for the inevitably more stringent environmental regulations for years to come.

IH&RA and Sustainability

I do believe strongly as President of The International Hotel & Restaurant Association (IH&RA) that all our hotelier members or not can subscribe to sustainable development by implementing hospitality management that responds to both the climate change by reducing carbon emissions, and also to socioeconomic imbalances by respecting the culture of each community.

Although, it will take from 3 to 6 years to reach critical level of reducing carbon emission, but I do predict that 2010 is “the year” that will constitute a very important starting point to combat and fight climate change, as well as poverty, hunger and disease. Encouraging investment in green infrastructure, we will enforce the development of sustainable tourism.

All of executives at our Industry that I did meet this year are unanimously agree that eighty percent of all hotels are small- and medium-enterprises (SMEs), at different stages of organizational development – only 20% consist of large enterprises, such as hotel chains. That being said, there are only few international standards for the hospitality industry, and national regulations differ greatly from one nation to the next.

Dr. Ghassan AIDI, President & Chief Executive Officer- International Hotel & Restaurant Association, 1-3 Rue Varembe, 1202 Geneva, Switzerland, Tel: +4122 734794, Email- ghassanaidi@gmail.com
Therefore universally-recognized standards have been defined this year, and we will see that during 2010, these standards will meet the different needs of hotels worldwide.

**Emeraude Hotelier Certification**

I am proud to announce that with IH&RA we are launching in January 2010 at our Congress in Serbia the Emeraude Hotelier certification. This certification is granted to hotels that successfully implement the guidelines stipulated to enhance sustainable tourism. The criteria are part of the tourism industry’s response to the global challenges of the Millennium Development Goals.

The guidelines, as defined by IH&RA, consider the correlation between the hotel industry and the natural, social, cultural and economic environment. They are considered a baseline which each hotel owners or managers should try to implement.

Please I do ask you not to be afraid of implementing these criteria as I do grant you that 50% of these criteria can be achieved without spending a large amount of Money in this difficult economy right now.

The criteria are divided into four sections, covering the many areas of sustainability: (1) Effective Sustainable Management; (2) Social & Economic Benefits to the Local Community; (3) Impacts to Cultural Heritage; and (4) Environmental Impacts. With the launching of the Emeraude Hotelier certification in 2010, IH&RA hopes to see many hotels participate thoughtfully in sustainable hospitality.

**Food Security**

Food Security falls under the fourth section of the Emeraude Hotelier certification. Sustainable food sources help to support the protection of biodiversity. It is therefore important to choose food sources adhering to responsible methods of production and harvest. Sustainable food and beverage should often be certified. In support of responsible action, hotel kitchens should consider adapting their menus to include regional products and dishes.

The careful selection of disposable and consumable goods helps to avoid needless waste. Environmentally-friendly materials reduce negative impacts on the environment. Bulk purchases reduce waste.

Hotels should give preference to local food and beverage products, and purchase them directly from local producers. Meat should come from farms that raise animals in appropriate and natural environments. Fish, seafood and game should not belong to endangered species. At least 20% of all fruits and vegetables in a hotel’s kitchen should be organic, for instance vegetables and herbs are cultivated. At least 20% of all other food and beverage should come from sustainably produced sources (products are certified).

The Emeraude Hotelier certification aims to achieve three goals. The certification should serve to motivate hotel managements as well as their staff to continuously develop and uphold sustainable practices starting in 2010. Secondly, the hotels’ business partners will be positively influenced to restructure their practices. Lastly, the hotels’ guests will perceive these sustainable actions, and thus be inspired to uphold responsible tourism.

**The Private Sector**
The future of our hospitality industry is entirely dependent on the future of this planet. It is the responsibility of all my fellow Hoteliers to adhere to the principles of the UN Global Compact in order to ensure that society and the environment flourish by our presence – not become hindered by it.

I strongly do believe and following my experience that we do stands to make a huge difference in the race for corrective action towards the environment. The public sector, run by local, national and international governments, is often halted by their own bureaucracy. Policy changes can take years to come to fruition.

Hotels, on the other hand, are extremely influential through their conscientious actions. Their grandeur and visibility inspire others to follow suit. Using their influence for positive change, hotels are a dynamic player in sustainability.

My fellow Hoteliers, let work together to make 2010 the year for sustainability at our industry and show the world that the hospitality industry has the ability and freedom to adopt changes immediately, and thus cause immediate change.
Tourism is an industry with its economic, social, cultural, and environmental aspects. There is no denying to the fact that Tourism has brought in a lot of foreign exchange, helped our country in the balance of payments as a whole but it has also created problems in as much as we spend a lot of money on creating facilities. It has undoubtedly helped us to create jobs for local employees but also cost a lot of money in creating jobs. Equally mixed are the social effects of tourism sometimes tourism has resulted in the dislocation of local people and damaged their economic interest caused inflation, changed their life style, challenged their cultural and even their other benefits equally mixed are the effects for Environment and that is the issue we need to discuss in growth length.

On the one hand, it has led to protection of physical environment- historic sites, monuments and also Wildlife. On the other hand it has caused irreversible damage to some of these. Many a coastline has been altered. Tourists themselves have choked the narrow streets of historic cities and overcrowded the picturesque country side. The fragile eco-system, particularly of the islands as also of the Himalayas has been negatively affected. They have been left behind irreversible damages. With tourists overcrowding in the Himalayan Region, there is impact on vegetation also. Collection of flowers on way to religious & social heritage sites in numbers and other human activities even endangered species in and around. There are possibilities of forest fires due to carelessness, chopping of trees for tent poles and firewood. Dumping of garbage attracts a lot weeds. Weeds have always followed Man wherever he has gone and a new element is introduced in these fragile eco-systems. Then traffic due to pedestrians and also vehicles alters the composition of vegetation. Road system that is built create disturbance in the Himalayan systems. Similarly camping’s also bringing in its wake certain ill-effects. All these factors do create negative impact in the eco-system.

But this does not mean nothing should be developed. Developments must be in consonance with the terrain and with the eco-system. This is the crux of sustainable tourism. Further that however significant the economic benefits, these cannot and shall not be the only criterion and that there must be a reformulation of the approach to Tourism Planning with emphasis on the socio-economic well being, cultural identity of host communities and conservation of the natural scenic sites and the character of historical and religious centers while ensuring the security & well being of visitors both national and international so they are able to have a relaxed enriching holiday experience.

Continuing on environmental aspects, water bodies like Lakes, Rivers, Coastal areas, over touristic activities lead to biological pollution. Dal Lake in Srinagar is a case of reference. The amounts of boats on Dal Lake, health hazard, Weed growth nearly choking the Lake. It is now a dying Lake. As if this is not enough pressure on the lake with recreational boats, surf riding, petrol driven vehicles the water is continuously polluted. Let us not forget the Kumbh Mela which has great negative impact on water quality when people congregate at one place and bathe.
Jet run noise pollution and air pollution are really our concerns for global warming. Exhaust emissions of vehicles has an indirect effect on air quality. No doubt modern science and technology and experts are deliberating on these issues to solve the problems. But global education to save the environment is the need of the hour man can have his tourism but not at the cost of destroying the eco-system.

Similarly Cruise ships cause enormous environmental damage. It is estimated that they discard many thousands of tons of untreated waste into the oceans of the world every day. Strict regulations need to be applied to this type of destructive tourism.

Now we can also look into wildlife and impact of tourism on this sector wildlife habitat has been affected by hunting by invading their natured habitat, photographing and so on. While the impact on larger mammals and birds is apparent, nothing has so far been reported on the reptile & insect life both of which are equally important. If Tourism is to be handled on a sustainable basis, we must remember that what is important is not the number of animals but the quality of animals and that needs protection all time.

Litter and garbage in and around wildlife parks often attract rodents, they attract bear, attract birds and the whole habitat is altered. There is also increasing demand for wildlife souvenirs furs, ivory ornaments horns so on so forth. Resultant effect is that animals are slaughtered.

Now the time has come we must have full research about the effect of Tourism on different eco-systems terrestrial and aquatic – the terrestrial to include mountains, sub mountains and several other that we have as also effect on Air, Water, Flowers and Fauna so that in concrete terms we know the extent of damage and take mitigate measures. This really indicates that we must look into carrying capacity of a particular site, that is, we should not indiscriminately put tourists to a particular site when the carrying capacity is not there. Tourism must be related to the resources that are available. It is the respect to nature first before we promote tourism. Tourism and Environment have to go hand, in hand have to have a symbiotic relation. We have to be fully aware of the dangers posed to eco-system by tourism and promote conservation. We have to ensure that tourism is developed in planned thoughtful manners so that the dangers we talked about in the areas of wildlife, Water body, Culture, vegetation etc are avoided. Here private sector has an enormous responsibility in providing environmentally friendly hotel design, construction and operational methods for sustainable hospitality development. Tourism & Environment can thus be “Equal partners” in the development process. A “Defensive Tourism Policy” will be necessary in future both for the well being of the tourist and environment protection covering. (1) Preparing inventory of tourism potential in eco-sensitive areas and research on carrying capacity of each site. The purpose is not to discard tourism but to ensure there is no eco-disaster and tourism should not be blamed for such eco-disasters. Unique creations of nature like the Himalayas should be opened to enjoyment in a manner that posterity is not deprived of these nature monuments. The planners must consider how to create a new architecture (say hotel) that becomes part of the landscape and not vice-versa, try to create possibilities of relaxation without excluding stimuli that are desirable, recycling of waste material, how to avoid the noise that goes with any concentration of people, how to avoid pollution that the sector of the hospitality industry catering to tourism cause directly or indirectly for boosting tourism & creating tourist facilities. One thing we have to understand that once the basic row material of tourism – the land itself is lost, it can never be reclaimed. Capital can be lost and multiplied again. We know development and exploitation have
triumphed over the protection of the environment almost everywhere and this pressure is increasing unabatedly. We have failed to understand the most important duty namely “Preservation of the Environment” We must understand that once you damage the environment, you reduce the quality of life. There is now echo for an integrated cost benefit approach to tourism which emphasizes all the economic, social and environment costs (damages) and benefits (advantages). We have to draw out a programmer which put emphasis or Research, Information and Education to have solid Public Relations for creating awareness for preservation of environment for quality life.

Tourism is going to be the world’s largest industry even at the projected lower rate of growth now. No less a person than the late Herman Kahn had himself predicted that after nuclear power, tourism had the most devastating impact on the environment. Globally there is now greater awareness. There are consistent efforts to ensure constructive growth of tourism with the broad based welfare of local communities in the host countries. Broad guidelines adopted by individual countries to suit their special needs and trying to regulate movement and numbers with concern about overall carrying capacity.

To quote from Manila Declaration on world Tourism which represents the collective wisdom of the assembled nations provide substantive material on which to base a re-evaluation of the existing operation and planning of National and International tourism. “Tourism development of both the national and international level can make a positive contribution to the life of the nation provided the supply is well planned and of a high standard and protects and respects the cultural heritage the values of tourism and the natural social and human environment”.

This itself, clearly maintains the need for balance in the development of tourism and conservation of environment.

This ‘Balance” is the need of the how.
Environmental Diversity in Indian Tourism

M.A. Haque

Introduction
Tourism has emerged as an important economic activity in the country. Substantial number of tourists can always be seen in cities, at places of historical or religious importance and also in the remotest parts of our country. They are from outside India as well as from other parts of the country. The purpose is to seek pleasure, adventure, recreation, study and appreciation of historical sites, gain knowledge about people, lifestyle, culture, wildlife, ecology, habitats etc. of the country and also to enjoy the natural beauty. Tourism is an important activity and also one of the fastest growing industries of the country. It is estimated to account for more than 5 percent of the GDP. Tourism is also a big employment provider. More than 42 million people get direct or indirect employment in tourism related activities.

Tourism Potential

Large cities, markets, shopping plazas, forts, palaces and religious sites have always attracted domestic tourists as well as from other countries. During last few decades quite a substantial number of tourists are attracted by diverse types of environment, forests, wildlife, lakes, rivers, mountains, beaches etc. India is located between latitudes 6° and 38° N and longitude 69° and 97° E, surrounded by the Himalayas in the north, Bay of Bengal in the east, Arabian Sea in west and the Indian Ocean in the south. Our coastline is more than 7500 km which is dotted by large number of beautiful beaches, mangrove areas, coral formations etc. All these attract tourists in large numbers. The two groups of islands on the two sides of the mainland have their own attractions for the visitors. In Andaman and Nicobar group of islands the visitors can enjoy totally different kind of forests, flora and fauna as well as lifestyle. On the other hand the Lakshadweep group of islands is famous for the coconut trees, corals, beautiful fishes and white sand beaches. Both these groups of islands have facilities for different types of sea-sport activities as well. If we look at the mainland there is great deal of variation with respect to environmental conditions in the country. Western Ghats receives about 2000 mm average rain, while certain areas of Rajasthan, Gujarat and Ladakh receive only about 100 mm of rain in a year. World’s rainiest place is in Meghalaya in the north-east. The north-eastern region is also known for its forests, rich wildlife and distinctive lifestyle. Ambient temperature varies extensively from one region of the country to another. As a result, a wide spectrum of habitats and ecological conditions exists in India. Certain areas have tropical rainforests while others support alpine type of vegetation. Still other areas support temperate or another type of forest. In addition, there are extensive grasslands, wetlands, rivers, estuaries, reservoirs etc. Large area of the country is occupied by deserts, hot deserts in Rajasthan and Gujarat while Ladakh and Himachal Pradesh have unique cold deserts.

On account of these environmental variations and variety of habitats India supports very rich flora and fauna. Several of the animals and plants are endemic to India. About plants people who are in the field of Botany are aware about and they visit the country for that reason. As far as animals are concerned, these attract common tourists as well. For example Asiatic lion can be seen in wild only in India in Gujarat. Bengal tiger is there in neighbouring countries too.

Dr. M.A. Haque, Director, Ministry of Environment & Forests, E-25, Type 5B Quarters, HUDCO Place, Andrews Ganj, New Delhi, e-mail: asrarulhaque@hotmail.com
But the number is quite limited there. In India it can be seen easily. Same is the case with one hornsed rhino. Many more similar examples can be cited which play important role in bringing tourists to the country. Also, the lifestyle and social conditions vary a lot from one region to another. Then every part of the country has its own historical past which is quite often reflected in historical buildings and monuments spread all over the country. All these factors play important role in attracting tourists and visitors.

Tourist arrival and revenue statistics

If we look at the figures relating to arrival of foreign tourists in the country and that related to the movement of domestic tourists inside the country cursorily, we may feel that our tourism industry is flourishing. But the fact is different. At world level the number of international tourist arrival for 2008 was recorded to be more than 920 million. India could attract only about 5.4 million, which is less than 0.6 % of the total. This is a highly dissatisfying figure. Reflection of the same can be seen in the receipts on account of international tourism. World over it was estimated to be about 944 billion US $ for 2008. India could procure only 1.24% of the same. This is the reason that India in 2008 stood at 41st position in global terms as far as world tourist arrival was concerned. In case of receipts through tourism India had somewhat better position i.e. 23rd. This could be on account of higher spending by the tourists visiting India. We have very large number of articles to offer to the visiting tourists and they do spend more as they are easily attracted by the same. However, we cannot rule out completely the role of differential tariff plans for domestic tourists and foreign visitors. To visit certain important monuments and buildings, the foreigners have to cough out much more than the local visitors. Even certain types of taxes have differential rates for the foreigners as compared to the Indians. But we need to consider that this situation is not liked by many foreigners, especially under the circumstance that in other countries no such discrimination is practiced.

Even if we compare ourselves with other countries in the Asia & Pacific Region, we lag behind in a big way. In this region India stood at 11th place in 2008 with respect to international arrivals. In case of tourism receipts, our position was a little better. We stood at 6th position in this region. But these figures are not quite comfortable. With the kind of landscape, history, art, culture, environment, diversity in terms of geography, flora, fauna, handicrafts etc. we are much superior to many of the nations which attract many more tourists. Hence, we need to introspect about the reasons for our lagging behind in the field of tourism. Certain aspects are being described here.

1. **Lack and Misuse of Infrastructure:** Basic infrastructure is deficient at most of the places which have the potential to attract tourists and visitors. Roads are in bad shape connecting most of the existing and potential tourist spots. Except a few isolated examples, while planning and constructing the roads, tourism promotion is rarely considered an issue. Even on highways the average speed of vehicles is not above 30 or 40 km an hour. Then there are various check points and other factors which result in further increase in travel time. Traffic jams even on highways and trunk routes is quite common. If one truck or bus breaks down or has some accident, it takes hours to days to clear the mess. During that period everyone on that route has to suffer. Even highways and important roads are not free from common obstructions. There are villages, towns and markets right adjacent to the roads. As a result, there are different types of obstructions, including pedestrians crossing the roads, domestic animals roaming on the
roads and every kind of vehicle parked along the roads and at times right on the roads. During religious and other types of celebrations, roads are always misused. It may be in the form of barriers for collecting contributions or for erecting pandaals and taking out processions. All these problems look quite small individually. But the combined effect is serious. One cannot be sure of reaching in time and safe to the destination. If any tourist/visitor gets trapped in one of such or related incidence, the person may not like to visit the place second time. In case of foreign tourists this kind of situation leaves a very bad taste and the person may act as a potential deterrent for the development of international tourism. Even with respect to vehicles we are quite behind. No doubt in recent years there is improvement in the quality of vehicles in the metros and large cities. But at other places the condition is extremely poor. The vehicles are rickety, overcrowded, with torn seats, damaged windows, noisy engines and what not. But people have no choice.

We boast of the largest network of rail links in the world. But if we look at the time needed to travel, we are miserable. Except few selected trains like Rajdhani, Shatabdi, Duronto etc. the average speed of even superfast trains does not work out to be more than 40 or 50 km an hour. Then there is the problem of late running of trains, frequent accidents and derailments etc. which delay the trains by hours. As far as the basic facilities in trains like toilets, drinking water, food etc. are concerned, except the few trains as listed above most other ones are highly deficient. Just as an example, we have to pay Rs. 12 or so for a bottle of packaged water. But there is no guarantee that the water is safe. People do local filling of simple tap water and sell the product as mineral water with impunity. We hear of a large force of workers employed by the Railways to provide various services for the passengers and for upkeep of the facilities. But in real term they are rarely to be found. As a result the passengers have to suffer. Trains running on shorter routes and in remote areas are in the worst state. Then we have the system of trains for local passengers traveling short distances on daily basis. They have to pay very low fair in the form of monthly tickets. The monthly ticket holders are not supposed to travel in long distance and express trains. However, those passengers never bother about the restrictions and travel in any train and in any compartment causing hardships for bonafide long distance travelers, including tourists. The railway administration never takes any initiative to stop this practice. In fact on many routes the ticket checkers start working only after those passengers leave the train.

Air travel is quite expensive in our country. Not everyone can afford it. Still large number of visitors and tourists opt for the same. Winter is the period when we get high number of tourists. That is the time when in the northern part of the country the flights get regularly disrupted on account of foggy weather. Even on normal days delays and cancellations of flights are not so uncommon resulting in difficulties for the passengers. Most of the airlines work on shoe string budget. They try to utilize the aircrafts to the maximum and maintenance suffers which ultimately results in disruption. Also, strikes and agitations are there by the airlines people, which result in delays and disruptions of services. All these are highly derogatory to the development of tourism industry.

2. **Law and order situation:** A recent phenomenon is the disruption of train and road services on account of agitations and demonstrations. If some political group or certain group of people has any grievance against the administration or for that matter against
any one, the easiest thing they resort to is to disrupt the train and transport services. They declare “chakka jaam” or “raastaa roko”. Everything may stop at the end. Quite often people indulge in loot and arson and they also damage the vehicles on road and the train compartments and other facilities resulting in untold hardships and misery for the travelers who are in no way responsible for the ‘problems’ which attract such agitations and resentments. The administration generally remains a silent spectator and leaves the innocents to suffer. Even during other types of violence we do not make any distinction between people. For example there have been incidences that during communal, caste or regional violence outsiders were targeted. Their belongings were looted and even some of them were killed just because they happened to be there.

3. **Lack of administration and control:** Leaving aside very high end hotels and guest houses which can be afforded by only a small percentage of tourists and visitors, other types of accommodations available in our country are highly substandard and also unsafe. There is no surety that people staying in those places will not be exploited. Regularly, there are reports of exploitation of tourists and visitors. Charges and tariffs are not fixed. There is no system of displaying the charges and tariffs in most such places. Depending on the circumstances the accommodation seeker has to pay. An important reason is that there is no system of administrative control over such facilities. Also, the police administration in our country is not at all sympathetic to outsiders, including visitors and tourists. There are allegations that at many places such facilities are operated illegally by local mafia in collusion with the local administration and police. Hence, if something goes wrong, the tourists/visitors have to suffer. They do not receive the expected help from the administration.

4. **General apathy towards outsiders:** In our country there is a general apathy towards outsiders. Right from the taxi operators, auto-rickshaw drivers, rickshaw-pullers to shopkeepers, everyone tries to exploit the outsiders. It is not uncommon in most of the places that higher price is asked for any item or service from the outsiders. Even in Delhi, our capital city, it is not possible to find a taxi or auto-rickshaw on road to carry passengers on meter charge basis. More or less similar situation exists in other cities and towns. Recently, in some large cities the system of radio-taxi has been introduced. It has eased the situation a little. But one may have to wait for half an hour to one hour for the taxi to arrive. Also, the charges are quite high for this facility. Also, our system is so cumbersome that the exploiter is always at advantage. For example, if there is some problem on a road and someone calls the police control room, in large cities the mobile squad may arrive. But they have no authority to take any action. The person has to visit the police station and report the matter there. Then the court procedure starts which may take years. The outsider cannot afford the same. In recent months there have been several cases of misbehavior with outsiders at tourist destinations. But nothing substantial progress has been achieved. In fact in several such cases the victim was harassed and finally they had to give up pursuing the matter.

5. **Proper upkeep of tourist sites:** We have very large number of tourist sites which are already on the tourist map of the country. People visit those sites in varying numbers depending on their importance, approach, facilities etc. Leaving aside a few exceptions it is difficult to find the sites properly maintained. It is common to find garbage dumped in the vicinity of the buildings or other structures. Large numbers of squatters are to be
found everywhere, inside and around the sites. Then there are shops and kiosks all around serving food and selling different types of goods. Even walking becomes difficult. A common feature is the army of beggars at those sites and they specifically target the foreigners and visitors from outside. At religious sites the problem is even worse. Apart from beggars and others there are ‘middlemen’ who fleece the visitors in the name of organizing religious rituals. They charge unspecified amount for the same. At certain places the problem is so acute that a tourist or visitor will think twice before going there. One problem which is almost universal in our country is that of civic amenities. It is quite difficult to find a toilet at our tourist sites. Even if it is there it will be in dilapidated condition, filthy, fittings removed, water leaking and so on. There is no one to look after the facilities. Women tourists and visitors have to suffer most as they cannot dare to relieve in open, which men, especially Indians, most often do. Also, it gives a very bad impression about the entire society to the foreigners. They are bound to think that Indian society is extremely uncivilized and unclean.

6. **Lack of interest in developing new tourist sites:** In our country the tourist sites that exist today are mostly the ones which have been there for decades. Even inside Delhi we have hardly added any new tourist site to the tourism map of the city in recent decades. Almost similar is the situation with other states and locations. It is not so that we have any dearth of places, monuments and sites which have the potential to attract tourists and visitors. But there is gross lack of initiative in this regard. Also, many places cannot be developed on account of poor connectivity and infrastructure. Development of fast connectivity and proper infrastructure requires investment. No one is ready to do so. Government departments lack money and will power. Organizations and individuals connected to tourism industry are only interested in harvesting the benefits. They are not interested in investments. As a result those places and destinations remain undeveloped and neglected. In fact with time those places degenerate.

7. **Dissemination of information:** We are very weak in communication and dissemination of information, especially on complimentary basis. Even at airports it is a rare phenomenon if we can find good quality material relating to tourist destinations. As far as train stations, bus terminus, taxi stands, markets etc. are concerned we have not at all utilized these places for dissemination of tourism related information. No doubt there are books on sale. But they are available mostly on book stalls and only at high end ones. No doubt some of the books are of international quality. But these are only in English and also, extremely costly. Books in vernacular languages are generally not at all available. If a few are there the quality is extremely poor. In contrast, in the developed countries and also, in many developing countries visitors and tourists are provided with wealth of information related to tourism at various points. Even post offices and banks have special corners for the same. Display stands are full of brochures, maps, booklets etc. which can be picked by the interested persons. Now high quality CDs are distributed freely in most of the countries for visitors and tourists. In our country we are yet to start utilizing this medium. A corollary of this is that in other countries even very insignificant sites, buildings, museums etc. receive large number of visitors round the year while in our country even prominent sites are not so popular among visitors and tourists.

8. **Encouraging activities which are detrimental to tourism and environment:** To boost their income, certain organizations, institutions and individuals associated with
tourism and travel activities allow and even encourage activities which are detrimental to tourism. For example, every tourist or visitor going to the forest, National Park or Sanctuary is interested in viewing the wildlife. But the problem starts when their choice becomes very limited. Everyone considers it essential to see from close range animals like tiger, lion, elephant, leopard etc. These are large animals. Their number is always small in any forest. Reasons are obvious. Tiger, leopard etc. are carnivorous. Being at the top of the food chain, their number cannot grow beyond a limit. In case of elephant, it is the size of the animal and its huge food and space requirement which do not allow the number to grow beyond a limit. This is the reason that there is no guarantee that these animals can be sighted by the visitors in a day or two. Visitors compare their visit with the films which they see on TV. They rarely realize that the film crew camps for weeks together to shoot and even then there is no guarantee of success. Occasional tourists compare their visit with TV shows and pressurize the management and often bribe the staff to view the animals from close. It is true that for any tourist destination it is vital that they get adequate number of visitors to make the activity profitable. Hence, at times the authorities indulge in practices which are not healthy. For example, animals are tracked and once they are spotted, visitors are sent to the location. Earlier, baits were also offered to the animals to attract them to a particular spot and visitors were kept close by. Now this practice has been discontinued. But it is alleged by activists that when some VIPs visit a National Park or Sanctuary, a modified version of offering bait is practiced to ensure that they can see the animals from close range. These activities lead to interference in the normal life of wild animals. Their feeding habits, hunting habits, sexual life etc. get affected. Also, by nature, the wild animals are shy and they do not like to come in contact with human being. On account of their forced exposure to visitors, their behaviour changes and they may not remain shy to humans and it is likely that they may attack people if they get opportunity.

9. Development of incompatible facilities: Tourists, who can afford high cost, generally demand high standard facilities even when they are in a forest, rural area or in a small town. There are two alternatives for the tour operators. Either they provide the facilities or face the risk of not receiving such tourists. The tour managers generally prefer the first option. This is the reason that we find star hotels, modern guesthouses with AC, TV, telephone etc. in many rural areas, small towns and even inside or close to forest areas, National Parks, Wildlife sanctuaries etc. As such, there is not much problem on account of these facilities being there. But these facilities change the landscape, adversely affect the normal life of local population and also create a barrier between the local population and the visitors. Visitors do not get opportunity to interact with local population and experience the local customs, rituals, lifestyle etc. Thus, one of the objectives of travel and tourism is defeated. When such facilities are created in forest or in the vicinity they exert serious impact on the environment and wildlife of the area. Lifestyle in high class hotels and guesthouses etc. is totally different from the lifestyle in and around forest areas. For example, consumption of electricity, water and other resources increase. Generation of waste is also more and the nature of waste is different as most materials are from outside. Use of disposables made of non-biodegradable materials, high power detergents and other chemicals multiply. Obviously, the infrastructures at those locations are not geared to deal with such wastes. As a result wastes accumulate and degrade the
environment. Also, the wild animals are attracted to the waste dumps. At times the wild animals devour plastic etc. with food reject

Conclusion

We need to consider tourism as an important activity and we need to understand that tourists and visitors provide employment, economic growth and avenues for development to the country. There is dire need to improve the infrastructure to encourage and spread tourism activities, especially in areas which are far flung. We need to consider the same as an investment and not a drain on the resource. Only then we can publicize those areas and sites to successfully attract tourists and visitors. Various government departments need to work in tandem to achieve the same. Also, new areas and avenues for tourism must be developed with proper facilities. At present some efforts being made to make general people sensitive towards tourism and tourists. But the same has to be done on larger scale so that common people and especially those with whom the tourists and visitors come in regular contact change their attitude. Also, there is need to sensitize the administration departments towards the need of tourists and visitors so that the tourists and visitors may get help from them if need arises. Further, certain activities which are detrimental to tourism and environment need to be curbed and efforts be made to replace the same with environment and tourism friendly activities.

Note: Views expressed in the article are of the author in his personal capacity.
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Indian Journal of Applied Hospitality and Tourism Research
Banarsidas Chandiwala Institute of Hotel Management & Catering Technology
Chandiwala Estate
Maa Anandmai Marg, Kalkaji
New Delhi 110019, India
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