ENVIROMENTAL MANAGEMENT PRACTICES IN THE HOTEL SECTOR IN SRI LANKA: EXPERIENCE FROM THE WESTERN PROVINCE

The tourism industry in Sri Lanka has begun to witness a significant revival following the end of the conflict in May 2009. In order to reap the benefits of the tourism industry boom, the government has set targets to attract 2.5 million tourists by 2016. Several initiatives are in place to cater to the increasing demand for hotel accommodation to the targeted number of tourist arrivals by means of new investments and expansions of existing accommodation facilities. Accordingly, the number of hotels rooms is expected to increase to 50,000 by 2016. As at 2013, the total number of rooms in both hotels and supplementary accommodation units counted for nearly 69 per cent of the total number of rooms. However, beyond the numerical targets for tourism industry, it is not clear whether enough emphasis has been paid to ensure the sustainability aspects of the industry.

Accommodation sector is highly reliant on the two natural resources; namely, water and energy for its all operations. It also generates waste. With the increasing number of tourist arrivals, there is a tendency to use significant amounts of energy and water and generate high amounts of waste. Considering both economic and environmental factors, it is important that the hotel sector undertakes

**KEY FINDINGS AND POLICY IMPLICATIONS**

**Large hotels seem to be better in adopting good environmental management practices.** This calls for the need for paying more attention to small hotels to improve their environmental management activities.

**Environmental management in hotels is significantly influenced by certain hotel characteristics namely, location classification and chain affiliation.**

**Space and structural constraints are common barriers for adopting good environmental management practices.** This indicates that environmental management should be considered at the initial stage of designing hotels or during refurbishments.

**Lack of commitment of top management, low priority, insufficient financial and human resources, perception and lack of technical knowhow are also important constraints faced by the hotels in adopting good environmental management practices.**

**Barriers for adopting better environmental management practices vary with hotel categories, namely size category, chain affiliation, location etc. Thus it is important that future interventions in promoting an environmentally sustainable accommodation sector are well targeted.**

**Hotels adopt good environmental management practices when they receive awareness, training and capacity building support.** This implies the importance of effective awareness creation and capacity building on improving environmental management in the hotel industry.
investments on energy and water efficient management practices and effective waste management approaches.
The research is highly opportune as the Sri Lankan government is in the process of expanding the industry and the accommodation sector with an increased enthusiasm of the private sector. The study intends to assess environmental management in hotels in Sri Lanka and factors affecting the adoption of environmental management practices.

**Study Area**
The study is based on the hotels registered with the Sri Lanka Tourism Development Authority (SLTDA) in the Western Province of Sri Lanka. Western Province shows the highest number of tourist hotels at provincial level in Sri Lanka. The districts in the Western Province, namely Colombo, Gampaha and Kalutara have around 110 hotels altogether.

**Data**
Primary data for the study was collected through a survey, using structured questionnaire. The questionnaire was pre-tested and fine-tuned based on the interviews with the key experts in the tourism, energy, waste and water sectors of Sri Lanka. According to the list of registered hotels obtained from the SLTDA, the number of hotels is 110. However, while undertaking the survey it was revealed that 16 hotels have to be removed from the sample as they were identified as not functioning during the survey period. Therefore, out of the 94 hotels available for the survey, only 78 per cent hotels participated in the survey, recording a response rate of 83 per cent. This seems to be a satisfactory response rate compared to the rates of the previous studies.

The survey included several steps. In the first round, hotels were contacted to identify the officer who is responsible for environmental management and collect his contact details. In the second round, the identified officers were contacted and the purpose of the survey was explained and formal request letters were sent. Based on the appointments, the trained enumerators visited the hotels to conduct face-to-face interviews. For most of the hotels, the same hotel had to be visited more than once, as the respondents could not give their records on energy, water, waste and performance indicators during the first visit. Also, a several round of telephone calls had to be made in getting the appointments and following up to collect missing data.

The characteristics of the participating and non-participating hotels were analyzed to see if there is any biasness in responding positively to the survey. There was no biasness for participating in the survey.

**Sample Characteristics**
Sample represents around 40 per cent of the small hotels, of which the number of rooms is less than 50. The average number of rooms of the hotels in the sample is 83. Around 68 per cent of the hotels have a star rating. Of the star rated hotels, the percentages of hotels under one, two, three, four and five star ratings are respectively 15, 13, 21, 28 and 22 per cent.

**Methods**
A multi-approach was used to measure environmental management. Three approaches were used, since a single approach was not sufficient to explain environmental management due to their definitional nature and data limitations on certain aspects.

**Study Approaches**

**Assessment of environmental management using proxy variables**
1. Maintaining environment records
2. Presence of an environment policy
3. Presence of Enivironmental Management System (EMS)
4. Receipt of Enviornment Awards/ Certification
5. Involvement in projects which provide awareness, training and capacity building

**Analysis of environmental management practices**
1. Energy management practices
2. Water management practices
3. Waste management practices
Findings

Level of adoption of environmental management practices is analyzed using adoption of specific practices in relation to energy, water and waste management. However, since hotels are adopting a number of management practices, it is difficult to find out the determinants for each practice. Therefore, the number of management practices adopted under energy, water and waste are taken as dependent variables. Also, the determinants of total number of management practices are also analyzed.

The highest number of practices can be seen under energy management. The average number of energy management practices is 3.78. This may be due to the fact that savings due to adoption of energy management practices are significant in overall operational cost of the hotels. Average numbers of practices for water and waste management are 2.62 and 1.82 respectively. Econometric models show that size category, purpose of customers, number of employees per room and location (city hotels and other) are significant determinants of total number of environmental management practices.

### Water Management Good Practices

- **Percentage of Hotels Adopting the Practice**
  - Dual flush toilets: **79%**
  - Linen and towel reuse: **56%**
  - Low flow shower and taps: **50%**
  - Use of treated waste water for watering the garden: **50%**
  - Rain water harvesting: **02%**
  - Sensors in toilets: **02%**

### Solid Waste Management Good Practices

- **Composting**: **22%**
- **Recycling**: **22%**
- **Solid Waste Segregation**: **18%**
- **3R System**: **13%**

### Waste Water Management Good Practices

- **Sewerage Treatment Plants**: **42%**
- **Septic Tanks**: **36%**
- **Biogas Production**: **36%**
Average Number of Good Environmental Management Practices

<table>
<thead>
<tr>
<th>Waste Water</th>
<th>Solid Waste</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.54</td>
<td>0.92</td>
<td>2.62</td>
</tr>
</tbody>
</table>

Energy Management Practices

- Energy 3.73
- Water 2.62
- Solid Waste 0.92

Barriers for Adopting Better Environmental Management Practices

The most important barrier for the small hotels is lack of priority assigned for environmental management. Also, it is important to note that difficulties in obtaining loans have been an issue for small hotels and none of the large hotels mentioned it as a barrier.

<table>
<thead>
<tr>
<th>Environmental Management Practices</th>
<th>Small Hotels</th>
<th>Large Hotels</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of will and commitment of the top management</td>
<td>6.5</td>
<td>4.3</td>
<td>5.1</td>
</tr>
<tr>
<td>Environmental management is not a top priority</td>
<td>32.3</td>
<td>12.8</td>
<td>20.5</td>
</tr>
<tr>
<td>Perception that costs outweigh the benefits</td>
<td>6.5</td>
<td>25.5</td>
<td>17.9</td>
</tr>
<tr>
<td>Insufficient human resources</td>
<td>6.5</td>
<td>12.8</td>
<td>10.3</td>
</tr>
<tr>
<td>Lack of financial resources</td>
<td>25.8</td>
<td>17.0</td>
<td>20.5</td>
</tr>
<tr>
<td>Difficulties in obtaining loans</td>
<td>6.5</td>
<td>0.0</td>
<td>2.6</td>
</tr>
<tr>
<td>Lack of technical knowhow</td>
<td>16.1</td>
<td>10.6</td>
<td>12.8</td>
</tr>
<tr>
<td>Constraints due to the structure of the hotel</td>
<td>16.1</td>
<td>14.9</td>
<td>15.4</td>
</tr>
<tr>
<td>Space constraints</td>
<td>25.8</td>
<td>23.4</td>
<td>24.4</td>
</tr>
</tbody>
</table>

This policy brief is based on the findings from a study on Environmental Management Practices in the Hotel Sector in Sri Lanka, carried out by IPS researcher Kanchana Wickramasinghe. This work has been undertaken with the financial support of the South Asian Network for Development and Environmental Economics (SANDEE) and its sponsors. Technical support and guidance has been provided by several SANDEE advisors and peers during the course of this research. The author also acknowledges the comments from the anonymous reviewer.