

# An evaluation of sustainable lodging management best practices in South Florida

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## 1. Introduction

Corporate social responsibility is a paramount concept in today's competitive lodging industry due to climate change. Hotels were second to hospitals in their negative environmental impacts because they attribute 75% of the lodging industries environmental impact due to the consumption of energy, water and non-durable goods (Bohdanowicz and Martinac, 2003). To remain competitive, organizations need to implement green lodging programs to demonstrate social responsibility.

There is a need for additional research on sustainable practices in lodging in the United States. This research is especially important in areas such as South Florida where tourism is imperative to the economy and climate change has the most impact (Nicholls and Kang, 2012; Rahman, et al., 2012; Myung, et al., 2012; Richins and Scarinci, 2009; Bohdanowicz, 2005; Leslie, 2007; Pizam, 2009; Mensah, 2006; Chen, et al., 2005; Erdogan and Baris, 2007). Environmental training of employees, green messaging in promotional literature and the purchasing of organic foods received the lowest mean scores for the adoption of environmental practices (Myung, et al., 2012). There is a need for increased education on the implementation of environmental management techniques, which would include manuals and workshops for staff regarding best practice techniques.

This study focuses on how lodging establishments in South Florida are using green lodging practices. The purpose is to determine and benchmark the environmental best practices that establishments are currently using to be socially responsible. The need for corporate social responsibility in lodging due to the lodging industries impact on the environment is reviewed. The *Green Lodging Program* (GLP) is introduced and the sustainable lodging *Best Management Practices* (BMP) is discussed. A case study using the BMP variables is presented and the results are concluded using a qualitative case study comparative analysis of two lodging properties in South Florida.

## 2. Literature Review

### 2.1. Corporate social responsibility

The lodging industry uses extensive amounts of water and energy, which have serious social, economic and environmental impacts. Bohdanowicz and Martinac (2003) stated "hotels have been found to have the highest negative impact on the environment of all commercial/service buildings, with the exception of hospitals". The average size hotel purchases more products in one week than 100 families buy in one year. A typical hotel room uses four times the amount of water than an average household due to all water related facilities and maintenance of grounds. The lodging industry also generates large volumes of waste including paper. Paper accounts for 40% to 60% of a property's waste (EPA, 2006).

The lodging industry needs to become socially responsible due to this enormous consumption of energy, water and waste. The industry has an opportunity to promote corporate responsibility through educating its staff and customers, embracing eco-friendly practices, and influencing complementary industries such as hotel suppliers (Rahman, Reynolds and Svaren, 2012). Numerous examples of lodging businesses engaging in 'green' practices and eco-tourism are rapidly increasing due to concerns about global warming (Schubert, Kandampully, Solnet, and Kralj, 2010, Foster, et al., 2000).

## **2.2. Background on the Green Lodging Program and sustainable lodging Best Management Practices (BMP)**

The *Florida Department of Environmental Protection* (FDEP) created the *Florida Green Lodging Program* (FGLP) because of the need for lodging businesses to meet green lodging standards. The FGLP was established to encourage the hospitality industry to continuously improve environmental performance through education and certification programs. There are currently 689 certified hotels and resorts within Florida. The FGLP certifies facilities based on environmental practices in six areas of sustainable operations:

1. Water Conservation
2. Energy Efficiency
3. Waste Reduction, reuse and recycling
4. Indoor Air Quality
5. Communication and Education (customers, employees and public), and
6. Transportation (recently added).

In addition, properties must follow ten specific guidelines that include (MyFlorida.com, 2012, Richins and Scarinci, 2009):

1. Identify an environmental champion.
2. Obtain top management commitment.
3. Create a Green Team.
4. Conduct an environmental assessment.
5. Establish goals and identify environmental improvement projects.
6. Submit environmental baseline data to the FGLP.
7. Implement environmental improvement projects.
8. Evaluate and monitor the program.
9. Schedule on-site certification visit.
10. Practice continual improvement.

## **3. Methodology**

Qualitative case study methods are recommended for analyzing green practices as it provides a deeper understanding of best practices in the hospitality industry (Laing and Frost, 2010). A comparative case study method was used to evaluate and compare two properties based on the FDEP's BMP and used the following five variables for analysis (FDEP, 2013):

1. Water Conservation
2. Energy Efficiency
3. Waste Reduction, reuse and recycling
4. Indoor Air Quality

5. Communication and Education (customers, employees and public)

The two properties have earned a *Green Lodge Certification* from The FDEP and were randomly selected from the south-east district of Florida in a cluster approach for the purpose of this study. The south-east district was chosen because it has the largest potential impact from climate change due to the properties proximity to the ocean and the low-lying areas.

The results are based on primary data collected via telephone interviews with each of the properties to determine the employees’ knowledge of the green lodging initiatives that had been implemented. The secondary data determined the level of communication and education of the customers, employees and public and was collected from the property's websites.

**4. Analysis and Results**

**4.1. Details of the property case study**

The two properties include the PGA National Resort and Spa, Palm Beach Gardens and the Bahia Mar, Fort Lauderdale, Florida. The PGA National Resort and Spa was one of the first hotels in South Florida to become certified by the FDEP Green Lodging Program in 2008 (PGA, 2013). The Bahia Mar is set along the Intracoastal Waterway where the environment is a central part of the Bahia Mar Beach Resort and Yachting experience. The BMP of both properties are compared in table 1.

**Table 1:** Comparative Analysis of BMP at PGA National Resort and Spa (PGA National, 2010) and Bahia Mar (Bahia Mar, 2012)

Best Management Practices	PGA National Resort and Spa, Palm Beach Gardens, Florida	Bahia Mar, Fort Lauderdale, Florida
Water Conservation	<ul style="list-style-type: none"> <li>• Voluntary third day linen and towel change program.</li> <li>• Installed 772 low-flow aerators in sinks from 2.0 gal/min down to 0.5 gal/min, sensor-type water faucets and shower heads in guestrooms from 2.2 gal/min to 1.8 gal/min, two 250 lb Ozone washing machines, three new Energy Star® 2008 dryers with humidifiers that sense when clothes are dry and circulate 2.5 times more air, rain gauges in outdoor irrigation system and new highly efficient pump system for domestic water.</li> <li>• Replaced guest room toilets (10-12 per year) with low-flow models.</li> <li>• Utilizes close loop recycled water for wash bays and washing equipment at golf courses.</li> </ul>	<ul style="list-style-type: none"> <li>• Limits the times towels are washed with its towel re-use program.</li> <li>• Installed low flow automatic flush toilets and reclaims water for irrigation.</li> <li>• Xeriscape techniques used for all landscaping</li> </ul>
Energy Efficiency	<ul style="list-style-type: none"> <li>• Utilizes compact fluorescent light bulbs</li> <li>• Purchased new computerized energy management system and carbon offsets for website and all remote users through CO2 Stats.</li> <li>• Installed Ozone washing machines (that do not use heated water), energy efficient chillers and cooling towers</li> <li>• Removed two electrical hot water heaters in the spa and tied to existing natural gas heaters.</li> </ul>	<ul style="list-style-type: none"> <li>• Utilizes towel re-use program to save energy when washing guests towels.</li> <li>• Installed energy efficient lighting and timers and programmable thermostats with automatic temperature adjustment.</li> </ul>
Waste	<ul style="list-style-type: none"> <li>• Recycles cardboard, paperboard (tissues boxes, dry food</li> </ul>	<ul style="list-style-type: none"> <li>• Recycles cardboard, office</li> </ul>

Reduction	<p>boxes, beverage carton containers, etc), newspaper, office paper, phone books, magazines, catalogs, aluminium, glass and plastic, metal food cans, cooking oil, cans and paper, guest room amenity bottles, old computer equipment and other electronics and construction debris (during 2007-2008 renovations)</p> <ul style="list-style-type: none"> <li>• Prints marketing materials on paper certified by the Forest Stewardship Council.</li> <li>• Uses double sided paper</li> <li>• Cancelled unwanted magazines and junk mail.</li> <li>• Donates eyeglasses to Division of Blind Services, old equipment, furniture and fixtures to Habitat for Humanity's Re-Store and unclaimed cell phones to Domestic Violence Shelter.</li> <li>• Eliminates 100% Styrofoam® products and junk faxes (by removing fax number from sender's database).</li> <li>• Replaced F&amp;B disposable cups, plates, flatware and plastic containers with reusable items.</li> <li>• Returns batteries and toner cartridges to the manufacturer.</li> <li>• Switched to dry cleaner that uses Furbimatic machines with alternative eco-friendly process and solvents.</li> <li>• Installed electronic reader boards for communication (replacing paper).</li> <li>• Painted andre-strapped guest room patio furniture rather than buying new ones.</li> <li>• Serves leftover banquet food in the employee cafeteria.</li> <li>• Sells organic cotton clothing and bamboo tees products in the pro shop.</li> </ul>	<p>paper, newspaper, plastics, toners, light bulbs and aluminium and steel cans (used in guest rooms and available to guests, public and employees).</p> <ul style="list-style-type: none"> <li>• Utilizes post consumer recycled paper goods throughout the premises.</li> </ul>
Clean Air Practices	<ul style="list-style-type: none"> <li>• Uses low VOC paints/adhesives, Green Seal® certified cleaning products and SteriTech (eco-friendly) pest control.</li> <li>• Replaced air ducts and uses High-efficiency (Merv 8) air filters that are changed every 90 days.</li> <li>• Air handlers are cleaned annually.</li> </ul>	<ul style="list-style-type: none"> <li>• Regular checks of air filters and the cleaning service only work with environmentally friendly cleaners.</li> </ul>
Communication and education - customer, employees and the public	<ul style="list-style-type: none"> <li>• Guests choose whether to wash sheets and towels daily or on a three-day rotation.</li> <li>• Encourages guests to purchase organic cotton clothing and bamboo tees from the pro shop (shown in the tag).</li> <li>• Employees are familiarized with practises so they know what they have to do to help</li> </ul>	<ul style="list-style-type: none"> <li>• Informs guests they can take part in the recycle program.</li> <li>• Appoints a "green" leader amongst employees to inform of individual tasks.</li> </ul>

#### 4.1. Discussion

*Water conservation* show the PGA National Resort and Spa has taken the most initiative and implemented multiple water saving devices. Two common characteristic of both resorts is the re-use towel program and the use of low-flow water fixtures.

*Energy efficiency* demonstrated that both facilities use low consumption light bulbs. Notably, energy-controlling key-slots are not implemented by either property. Studies show that hotel lighting usage patterns do not reflect a significant dip in energy consumption from 11 am to 5 pm when guest rooms are typically unoccupied but instead guest room lights are on 20-25% during this time (WattStopper, 2001).

*Waste reduction* show some of the best practices benchmarked includes the fervent use of recycling. The PGA National excels further by using recycled products such as marketing materials, repairing guest furniture (rather than buying new) and serves leftover banquet food in the staff cafeteria.

*Clean air practices* indicated that PGA National has taken the most initiative and applied innovative BMP such as using SteriTech eco-friendly pest control and green-seal certified cleaning products. Although all properties clean AC vents, only Bahia Mar uses environmentally friendly cleaners.

*Communication and education* can be improved at both properties. Lodges need to communicate their BMP on their web sites because travelers are becoming more environmentally aware, however, neither properties do this well. Neither properties state whether they have instigated a "head" of the green initiative. There should be one employee in every facility that is in charge of training and educating the customer, employees and the public. When calling each of the properties, the reservation agents that answered the phones were not familiar with the properties green initiatives and BMP.

## 5. Conclusions and Implications

There is an increased attention towards environmental protection due to climate change, which has made green lodging a corporate social concern. Environmental reporting and benchmarking is critical in the implementation of sustainable practices. Based on the case study analysis from this study we suggest lodging managers use PGA National Resort and Spa as a benchmark for lodging properties in South Florida because it have excelled in a majority of BMP.

There are implications for research and education on green lodging best practices. The implications of this study for researchers is to build the body of knowledge of green lodging best practices and for education and training of employees is to incorporate in university programs to train the future leaders. Employee manuals and ongoing training on green lodging initiatives and further research to evaluate the implementation of lodging best practices is essential to increasing customer confidence and loyalty. Additionally, to build consumer confidence in the green lodging industry and be socially responsible, these standards must be monitored and reported to the public.

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