

# **TWO PERSPECTIVES FOR SUSTAINABILITY: A PILOT STUDY USING A DELPHI PANEL TO CREATE A MANAGEABLE SUSTAINABLE PRACTICES PROGRAM**

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## **ABSTRACT**

*Environmentalists and business leaders do not always share the same concerns. The purpose of this exploratory study was to examine sustainable practices via two perspectives, environmentalists and hospitality leaders. Sustainability has become an increasingly popular research topic, with many organizations developing best practices. This research project used one extensive list from the Center of Sustainable Tourism which contained 207 sustainable practices. The research results contained 59 items that both the environmentalists and hospitality leaders could agree upon their significance. Of these 59 practices, 17 of them were considered Bright Green, or being very desirable for both groups. The derived practices will be analyzed and discussed for feasible business implementation.*

**KEYWORDS:** Sustainable Practices, Environmentalists, Hospitality, Delphi Panel.

## **INTRODUCTION**

Different groups have different perspectives about business and the environment. There is a need to be profitable, but there is also a growing concern about our planet. An increasing number of hospitality organizations are recognizing the benefits of going green in hotels (El Dief & Font, 2010; Nicholls & Kang, 2012), in restaurants (Hu, Horng, Teng & Chou, 2012; Kasim & Ismail, 2012), and in the meeting and convention industry (Russell, 2008). Recent trends have focused

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on environmental concerns, the use of technology, and of efficient energy usage (Holcomb, Upchurch & Okumus, 2007). Benefits generally include decreased operating costs due to improved energy efficiency and waste reduction, and also better relations with government regulatory agencies, giving rise to enhanced marketability with green minded travelers, or in other words, an increase in profitability. Despite the growing number of hospitality organizations that would like to be more environmentally and socially responsible, the issue becomes perplexing because there are several different opinions on sustainable practices. Numerous lists and manuals on sustainable practices have been developed for the tourism industry. However, they do little to indicate the varying return on investments, payback periods, initial costs, or the environmental benefits that different practices might offer, and therefore they do not provide managers with the guidance they need.

### **PURPOSE**

This project aims to refine these lists and identify the most important practices for hospitality and tourism businesses (or any business) to implement from the perspective of both the environmental benefits and the applicability of hospitality and tourism organizations in adopting these practices. The Center for Sustainable Tourism (2017) has developed a checklist of over two hundred sustainable practices for the tourism industry. This project aims to identify the most important practices for hospitality businesses to implement from the perspective of the environmental benefits of implementing the practices and the applicability of hospitality organizations of adopting the practice, and hopefully improving profitability. The research used a Delphi Panel of environmental specialists and hospitality leaders in order to evaluate the list of sustainable practices. The researchers graphed the means of each sustainable practice to visualize the concept and develop best practices in the hospitality environment.

### **LITERATURE REVIEW**

#### **Sustainable tourism or sustainability**

Sustainability rests on the need for survival that depends either directly or indirectly on the environment. Sustainability is an ongoing quest to establish and preserve conditions under which humans and nature can coexist in dynamic harmony. It is not constrained to one industry, it impacts each and every person, business, and all of the environment. Sustainability is a never-ending practice; it is intended to enhance the well-being of people and the environment. For a business to be sustainable, three criteria need to take precedence: (1) people, (2) planet, and (3) profit (Center for Sustainability, 2017).

Sustainability is often referred to as a wise use of resources. Consequently, there are four basic principles of sustainability: (a) the idea of holistic planning and strategy making, (b) preserving essential ecological processes, (c) protecting both human heritage and biodiversity, and (d) the idea that productivity can be sustained over the long term for all future generations (WCED, 1987). Werbach (2009) discussed the four components of a true sustainability program, they are:

1. Social – conditions that affect the organization and community, examples are poverty, violence, injustice, or education

2. Economic – assist the community and people to meet economic needs, which then affects the social component
3. Environmental – initiatives that ensure the environment will be sustained for future generations, and
4. Cultural – the idea of protecting the identities of communities and people, thus relating back to the social component.

A number of best practices have been studied, indicating that sustainability can lead to savings, increased employee/customer satisfaction, and even higher customer demand, representing business opportunities from a financial perspective (Bohdanowics, Simanic & Martinac, 2005; Goodman, 2000; Scanlon, 2007). One example of this is Whole Foods. Since the 1990's Whole Foods has seen its stock price increase over 2500%, and the popularity of the store and their sustainability program is a part of their product offering (Thorne, Ferrell & Ferrell, 2011). Environmental stewardship still takes a “backseat to other operational concerns in many cases” (Bohdanowics, 2005). The adoption of these practices, especially in smaller organizations (representing a vast majority of companies) are subject to “personal, socio-cultural, and situational factors” (Tzschentke, Kirk, & Lynch, 2008). Consequently, the implementation of these sustainable practices is often not planned, and not properly aligned with the current business' strategy (Melissen, 2012). Hence, it would be wise to understand what is currently happening in various hospitality and tourism sectors.

## **BEST PRACTICES IN SERVICE INDUSTRY SECTORS**

### **Lodging sector**

Hoteliers have an industry association that has established a framework for best sustainable practices. The American Hotel and Lodging Association (AH&LA) began their sustainability initiative in 1996. The initial impetus was placed on towel and linen reuse by their guests. In 2005, AH&LA created the Green Task Force and issued a policy statement and a framework for best practices (AH & LA, 2013). Kimpton Hotels, a California based company was also an early adopter of sustainability. According to a study by Butler (2008), Kimpton had 16% of their guests stay because of this eco-friendly stance. Within the last several years, companies such as Fairmont Hotels and Resorts, Hilton, Marriott, Taj Hotel Group, and InterContinental Hotel Group have started their sustainable programs (Houdre, 2008).

The Green Seal, is one prominent sustainable rating system for hotel operations, it is called the Green Lodging Program. This program is a non-profit, third party certification and development body. It has been certified by the Environmental Protection Agency (EPA). Los Angeles, California, is currently the largest city with Green Seal certified hotels, with over 50% of the hotel rooms along the LAX (Los Angeles International Airport) corridor. Some of the hotels involved are: Westin Bonaventure Hotel and Suites, Hilton Los Angeles/University City Hotel, Sheraton Gateway Los Angeles Hotel, Westin Los Angeles Airport Hotel, Crowne Plaza Los Angeles Airport Hotel, and the Hilton Los Angeles Airport Hotel (Green Seal, 2015).

In regards to the physical structure of facilities, the hotel industry has two certifications. The first one is LEED, or Leadership in Energy and Environmental Design. LEED has developed a point rating system targeted to the building's

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structure (Green Building Council, 2017). The second organization for sustainability is Energy Star, which was started by the United States Environmental Protection Agency (US EPA). Their program started in 1991 with a focus on efficiency in commercial lighting. In 2002, the EPA teamed with the United States Department of Energy to focus on industrial, commercial, and residential buildings, factories, and appliances. The mission was to save money through lower energy bills, and to protect the environment through energy efficient products and practices. As of year-end 2016, 9.2% of United States hotels track their energy performance via EPA's Portfolio Manager, although it is probably higher since there are other organizations tracking energy performance. (US EPA, 2017).

The global concern of sustainability must be noted. There are numerous international organizations that also certify green programs. The International Tourism Partnership (ITP) presents the Green Hotelier. They focus on sustainable aspects of hotels. Many hotels participate in this program, from reducing food waste to environmental training and awareness. In 2016, ITP launched their water Measurement Initiative (ITP, 2017).

### **Food service sector**

To embrace sustainability, the food service industry places value on green practices, and has several certification programs. Some examples are the National Restaurant Association (NRA), the Green Restaurant Association, Sustainable Foodservice Consulting, the Green Food Service Alliance, as well as a component of LEED. In 2008, the NRA started the conserve initiative to establish standards for environmental responsibility (NRA, 2017).

The Green Restaurant Association is a non-profit organization that helps food service providers become more sustainable, and more environmentally friendly. Food service providers can become certified in 7 categories: (a) water efficiency, (b) waste reduction and recycling, (c) sustainable durable goods and building materials, (d) sustainable food, (e) energy, (f) reusable and environmentally preferable disposables, and (g) chemical and pollution reduction (Green Restaurant Association, 2017).

There are also international organizations concerned with restaurant sustainability. Green Key is a voluntary eco-label for hotels and hostels, campsites, holiday parks, small accommodations as well as conference centers, attractions and restaurants. The Green Key award is based on compliance with strict criteria in the areas of environmental management (water, energy, waste, and cleaning) and sustainability education (staff, guests, and suppliers). There are over 2,500 organizations in over 50 countries participating (Green Lodging News, 2017).

### **Meeting and convention sector**

Sustainability in the meeting, special event, and convention section is a continuing trend. According to the Convention Industry Council's (2004) Green Meeting Report, "A green meeting or event incorporates environmental considerations to minimize its negative impact on the environment". The two major benefits are the economic bottom line and the environmental bottom line. In May of 2016, the Green Meeting Industry Council (GMIC) will merge into a subsection of the Convention Industry Council (CIC). The CIC is the preeminent organization representing this sector (CIC, 2016). The CIC commissioned research to be completed on sustainable practices, it found 11 major practices. They are:

1. Sorting recyclables (73% requested by planners)
2. Vegetarian menu options (65%)
3. Allergy friendly menus (59%)
4. Energy efficient lighting (58%)
5. Local food sourcing (57%)
6. Use of water glasses & filling stations (in lieu of plastics) (56%)
7. Donate leftover food to charitable organizations (55%)
8. Linen & towel reuse programs for lodging (53%)
9. Offering volunteer projects for meeting attendees (52%)
10. Divert food waste from the waste stream (51%)
11. Using meeting apps for smartphones (to reduce paper usage) (50%) (CIC, 2016).

This study also identified the most common certifications. For third-party planners, the certifications included: LEED, APEX/ASTM, or the CIC's Accepted Practices Exchange/American Society for Testing and Materials, and or Green Key (hotels only). For suppliers, the certifications included LEED as the most prevalent, followed by APEX/ASTM, Trip Advisor Green Leaders, and Energy Star (CIC, 2016).

Research in the meeting and event sector has seen a steady increase. In 2004, Crouch and Louviere suggested a tremendous competition between destinations for convention business; thus, it is imperative to know what is important to meeting planners. Lee and Black (2005) identified site selection as an important factor for the convention and meeting sector. Thus, it is very important to understand the influences of meeting planners and association executives. Russell (2008) identified sustainability as a trend in the meeting industry. Park and Boo (2010) documented the importance of meetings/conventions on local economies. They found that sustainability was important to attendees, but these attendees were sometimes hesitant to pay additional taxes and fees.

## **METHODOLOGY**

### **Delphi panel**

The Delphi method was developed during the 1950s at Rand Corporation to make effective use of potential intra-group interaction (Breiner, Cuhls & Grupp, 1994). The method has proved to be especially appropriate when the subject matter lends itself to conducting subjective (qualitative) rather than quantitative analysis (Linstone & Turoff, 1975). The central aim of the Delphi method is to eliminate any direct confrontation among the experts and to allow judgment to be reached by consensus based upon increasing amounts of information becoming available (Prendergast & Marr, 1994). A Delphi study involves a number of considerations, including: (a) the selection of panelists, (b) the design of the questionnaire, (c) the provision of feedback, and (d) a decision on the number of rounds to be conducted (Yong, Keng & Leng, 1988). The Delphi method is designed to gather a consensus of opinions from a field of experts while maintaining anonymity of the participants to avoid peer pressure (Davidson, 2019; Von der Gracht, 2012).

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This research used a ranking-type variant of a Delphi study. Simply stated, the ranking-type Delphi is used to reach a group consensus about the relative importance of a set of issues. This goal is achieved through the elicitation of experts' judgment using an iterative controlled feedback process that includes three steps, namely, brainstorming, narrowing-down, and ranking (Par  t al., 2013; Schmidt, 2007). The original Delphi method used four rounds of participation. Many other researchers use three rounds: open-ended questions (brainstorming), questionnaires, then consensus (or rankings) (Par  t al., 2013). This study used two rounds, because consensus was reached with the second round, thus a third round was not necessary.

There are several disadvantages of the Delphi method. One is the concern of offering anonymity; the participant may not be the one responding to the survey. To address this concern, each participant's professional email address was requested and all surveys went to this email. Each participant was asked not to share the surveys with any other persons. The participants were chosen through the researchers' personal networks, thus depending on the researchers' knowledge about the participants. Another disadvantage is the possibility of the participant's computer firewall blocking the survey. Test surveys were sent to each participant before the beginning of data collection to confirm they were able to receive all surveys (Toronto, 2017). Other disadvantages that may be related with the Delphi Method includes the reliability of the questionnaire design, thus the researchers completed a test round using the survey with academicians who taught sustainability classes. Finally, there is always difficulty collecting data from all participants (James & Warren-Forward, 2015).

The panel size in a Delphi study varies with at least 12-20 participants considered acceptable (Bennett, 2008; Ludwig, 1997). The optimal number of participants in a Delphi study may be defined by the minimum number necessary to establish a representative pooling of judgements and the researcher's data processing capabilities (Hsu & Sanford, 2007; Ludwig, 1997). The number is also impacted using homogenous versus heterogeneous participants. This study will use homogenous participants as they will all have a knowledgeable background and experience in sustainability. If a homogenous sample is used then the sample may be smaller, ten to fifteen participants (Hsu & Sanford, 2007; Toronto, 2017; Wilkes, 2015). A smaller, homogenous sample is more likely to produce a stronger response rate, an easier data processing, resulting in a timelier turnaround time for rounds, maintaining the strong response rate (Limestone & Turoff, 2011; Wilkes, 2015). The lead author contacted 12 environmentalists from the North Carolina Department of Environment and Natural Resources and 12 industry hospitality/tourism professionals to participate in the Delphi panel. With busy schedules, the researchers did not expect all to commit, but ten individuals from each group agreed to participate.

The survey of sustainable practices was taken from the Center for Sustainability (2017), and contained 207 items. The survey contained the following categories: a) greenhouse gas emissions (10 items), b) waste reduction (22 items), c) recycling (26 items), d) freshwater consumption (27 items), e) energy conservation (28 items), f) cleaning products (13 items), g) environmental concerns (16 items), h) community involvement (22 items), i) education (20 items), and j) purchasing (23 items). The environmentalists/hospitality leaders were asked to rate the importance of the sustainable practice. This was placed on a Likert-type scale,



from 1 (not importance) to 5 (essential). The participants were asked to rate the practicality of implementing the sustainable practice. This was placed on a Likert-type scale, from 1 (not practical) to 5 (extremely practical).

Since the number was so great, and would take extensive time for the panelists, it was decided to break the survey into smaller segments of approximately 20 to 30 items, and conduct the survey over an 8-week period. It must be noted, several weeks did not have all panelist respond (no reason for not completing the task was given). Panel members were asked to complete a rating of the competencies, and the members were given a dialogue box with unlimited space to provide more specific feedback. Several were identified each week, but some were already incorporated in the list of 207 items. The researchers used SPSS (version 24) to calculate statistics. The researchers used Microsoft Excel to graph the means to a scatter graph.

**Table 1. Means for Sustainable Categories.**

Category	Environmental Mean (SD)	Hospitality Mean (SD)
Greenhouse Gases	4.05 (.46)	3.22 (.63)
Waste Reduction	4.15 (.42)	3.87 (.38)
Recycling	4.79 (.23)	4.31 (.72)
Freshwater Consumption	4.22 (.40)	3.70 (.64)
Energy Conservation	4.31 (.33)	3.73 (.58)
Cleaning Products	4.48 (.33)	4.52 (.28)
Environment Concerns	3.73 (.32)	3.52 (.64)
Community Concerns	4.34 (.36)	3.89 (.56)
Education	3.81 (.54)	3.96 (.53)
Purchasing	4.46 (.26)	3.65 (.42)

Next, the researchers used scatter graphs to plot the hospitality/environmental means for each of the 207 items. The hospitality mean was placed on the x-axis, the environmental mean on the y-axis. Figure 1 shows the results. This graph shows almost all means are above 3.00, thus the next objective was to change x and y-axes to show more detail. Figure 2 uses 3.00 as the starting point for each axis. To get to the best results, another new graph was generated, one using a new starting point of 4.00. This graph displayed four quadrants. The upper, right quadrant is called the Bright Green quadrant, where the highest means for both groups were recorded. It contained 17 items. The lower, right quadrant is the Hospitality Green quadrant, and displayed the means for 4 items. The upper, left quadrant is the Environmental Green quadrant and displayed the means for 20 items. The lower, left quadrant is the Light Green, and displayed the means for 18 items. All quadrants are valuable. Scatter graphs are given in **Figures 1-3** and **Table 2**.

## DISCUSSION

This project identified the most important practices for tourism/hospitality businesses to implement from the perspective of both the environmental benefits of implementing the practices and the applicability of tourism and hospitality





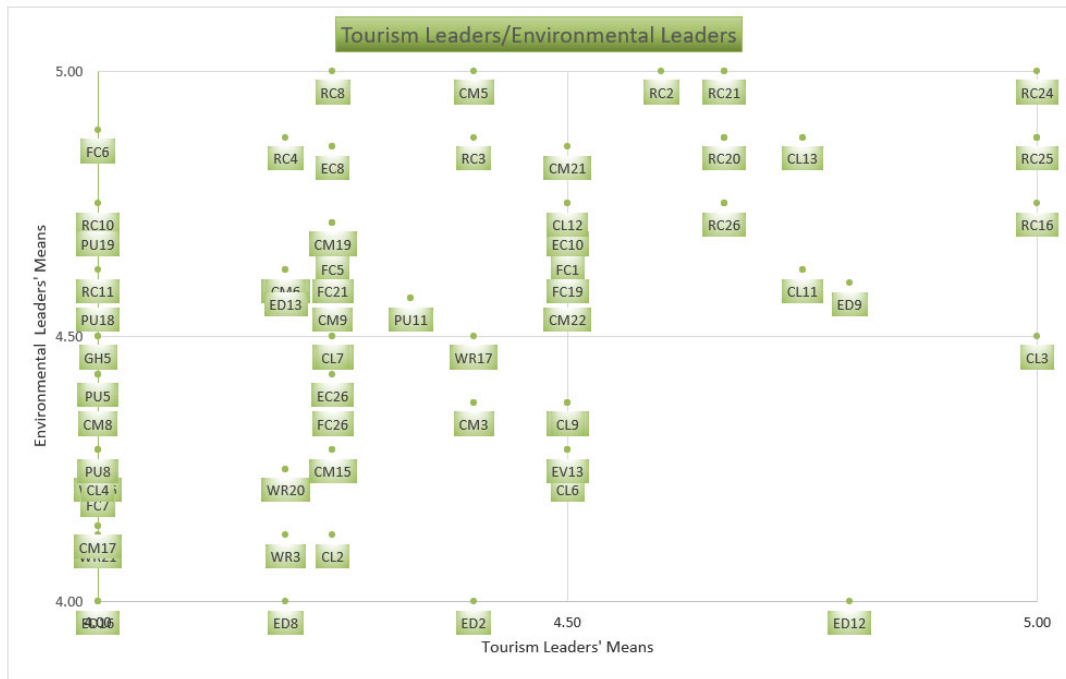


Figure 3. Tourism leaders/environmental leaders’ mean graph using 4.0 as a starting point.

Association’s Conserve Initiative, Green Restaurant Association, and Green Food Service Alliance (National Restaurant Association, 2017). For international sustainability, the Green Globe Certification is an online program with high standards for becoming certified in sustainability (Green Globe, 2011). By working together and placing a starting emphasis on the 59 items in this study, both sides can help lead the success of sustainability within organizations.

### PRACTICAL CONTRIBUTIONS

This study took a holistic approach to the idea of sustainability. The means indicated numerous important sustainable practices, evident in **Figures 1, 2, and 3**. This research focused on the larger umbrella of tourism. The sustainable practices are very practical across numerous businesses, and not just the hospitality business.

The goal is to implement as many practices as possible, thus the Bright Green quadrant (and to an extent, the Hospitality Green). There is a total of 21 items in these two quadrants. They have a focus on common sense practices, recycling and cleaning products. This is understandable because the tourism/hospitality leaders are focused on these items in their professional lives. The left side quadrants have an environmental focus, again, because of the emphasis placed on the environmental means. These quadrants focus on freshwater consumption, community involvement, and education.

Consumers are paying attention to which organizations are implementing sustainable practices (Butler, 2008). Among the hospitality industry, implementing a sustainability program has become a main-stream idea, but also within many other industries. The main purpose is to offer and promote a sustainability program, which attempts to show consumers the organization cares, promotes and improves the environment in which it operates. Organizations should understand implementing a sustainable program should not be done just as a public relations stunt, the sustainable program should be a vital part of the organization’s overall strategic plan. The results of this research can help companies advance their sustainable program. The one caveat is to make sure it matches the company’s

Table 2. Individual Items for the 4 Quadrants.

Environmental Green	Bright Green
<p>Use green building design, use electronic routing slips to eliminate paper, install low flow aerators, use/publicize recycling bins, use low energy mode when appropriate, instill preventative maintenance plan, streamline operational systems (less paper), use customer feedback on sustainable efforts, frequently test for gases, buy energy efficient appliances, avoid excess water run-off, reuse envelopes, prevent soil loss, use local goods, complete life cycle analysis for major investments, use high-efficiency hand dryers, instill a fuel economy program, use environmentally friendly solvents, use no chlorofluorocarbons</p>	<p>Recycle florescent light tubes, recycle electronics, recycle batteries, properly store chemicals, recycle hazardous material, recycle newspapers, recycle cardboard, insure proper storm water run-off, inspect HVAC, use environmentally friendly cleaning products, recycle carpeting, weatherize the facility, complete inspections, water grounds in early morning/late at night, keep exterior of building clean and safe, change air filters frequently, provide employment opportunities for community members</p>
Light Green	Hospitality Green
<p>Purchase sustainable products, use multiple climate control thermostats, preference to environmentally friendly landscaping, use mulch around plants, direct development towards existing communities, purchase environmentally friendly building products, recycle toner cartridges, use insulation, use less harmful cleaning products, provide alternatives to plastic water bottles, use automatic shut-off sinks, use rechargeable batteries, donate unwanted equipment, limit the use of chemical products, exceed minimum wages, encourage guest to buy local, train staff on local customs</p>	<p>Use latex paint, protect sensitive areas, proper pest management control, develop partnership with other organizations within community</p>

vision and mission statements. This research will help a wide spectrum of organizations start their discussion on sustainability. When an organization considers implementing sustainable practices it should consider the initial investment and potential return on the investment (ROI). At the Little Nell Hotel in Aspen, Colorado, their 2-story underground parking garage had inadequate lighting by halide lights. The initial investment for florescent lighting was \$19,000. The new lights pay back \$11,500 annually through energy savings and labor reduction, or yielding a 60% return on investment. The best aspect, it will keep 300,000 pounds of carbon dioxide out of the environment (Schendler, 2001). Thus, the remaining 59 items listed in the survey questions might be more appealing to operators since the practice could be implemented with little or no initial investment and provide instant savings to the organization, for example using old sheets and towels as cleaning rags. These practical contributions focus on the profit component of the sustainability equation.

## **THEORETICAL CONTRIBUTIONS**

Sustainability is focused on people, the planet, and profits. The Brundtland Report (1987) focused on development that meets the needs of the present, without compromising the ability of future people and their needs (WCED, 1987); thus, the focus on people and planet. Organizations are going to want to understand the financial impact of implementing sustainable practices within their operations. The researchers of this project tried to show sustainable practices can be implemented with little to no cost and because consumers are becoming sustainable focused not only in their personal lives, but also on where they spend their money. An organization implementing these 59 items could potentially result in growing the bottom line.

The unique aspect of this research was to combine the perspectives of environmentalist with hospitality and tourism. Many studies have focused on either one, but not on both perspectives simultaneously. By reducing the number of practices from 207 to 59, it will be easier to monitor the sustainable practices that have the most impact on people and the planet. As it turned out, many of the 59 items identified are some of the easiest practices that can be implemented in locations, such as adding signs that ask a guest to reuse a towel.

Sustainability is also being held accountable for government regulations. Noncompliance with regulations results in a costly fine. By narrowing the field of sustainable practices, companies will be able to verify their compliance with regulations. Sustainability can also impact community relations. Alerting consumers/customers of their sustainable practices increases the goodwill of the company, and hopefully the likelihood of future visits to the company because of the sustainable practices (Epstein & Buhovac, 2014). As consumer awareness continues to grow over time, many consumers are adjusting their spending habits and focusing on organization that have taken steps to reduce their carbon footprint, or in other words implement sustainable practices. By reducing the number of practices on the list from the Center of Sustainability (2007), this will make it easier for the companies to decide on marketing their sustainability.

## **LIMITATIONS AND FUTURE RESEARCH**

This study used a Delphi panel, and as discussed earlier, has some advantages as well as disadvantages. This may have caused biases in responding to the survey, such as a central tendency, immediacy, rater knowledge about each criterion, or boredom with the survey length. Instead of sending all 207 criteria to the members at one time, it was broken down to be completed over several weeks. This could have also had an impact on members' response biases because of the length of time and energy expended. This study did not focus on one specific area of hospitality, rather all sectors, and used a pre-developed list of sustainable practices.

Given the exploratory nature of this study, the intent is to use the 59 best identified practices, and further report on the environmental importance by surveying members of government environmental departments and to further report on the practicality of implement the sustainable practices by surveying members in each of the sectors of hospitality. This may allow for a better understanding of what can (and cannot) be accomplished in regards to sustainable practices in hospitality.

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