

Environmental awareness, initiatives and performance in the small- and medium-scale enterprise hotel industry of Malaysia

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ARTICLE INFO

Article history:

Received 16 November 2019

Accepted 5 January 2020

Published 31 January 2020

Keywords:

Environmental management systems

Hospitality

Sustainability

Small- and Medium-Scale enterprise

EMS implementation

ABSTRACT

This paper examines the environmental awareness, initiatives and performance in the Malaysia Small- and Medium-Scale Enterprise (SME) hotel industry revealing that most hotel managers actively introduce initiatives that contribute to cost savings. The main purpose of this paper aims to examine the environmental awareness, initiatives and performance in Malaysia SME hotel industry. A mixed research method was adopted involving quantitative surveys with 252 hotels in Malaysia and 11 face-to-face interviews with the selected hotel managers, facilities managers and engineers. Responses from the surveys and interviews with 252 managers show that SME hotels in Malaysia have a high level of environmental awareness. Most hoteliers actively introduce initiatives that contribute to cost savings. Initiatives including using energy conservation light bulbs, having an active system to detect/repair lacking facilities and installing water conserving fixtures are widely implemented, while programs involving using solar lawn light, recycling leftover food and reusing wastewater. Major barriers for going green include the lack of government regulations on environmental management systems (EMS), financial constraints, the lack of employees to handle EMS and the fear that environmental initiatives may negatively impact the guest's experience, especially customers who expect enjoying the luxuries services in Malaysia hotels. Lower star hotels experience more difficulties in adopting green approaches. This paper presents a single case study of Malaysia; therefore, the results in this research may have limited generalizability.

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1. Introduction

Sustainability is one of the most important issues currently facing our earth. Globally over the past decades, hoteliers have turned their focus to the importance of sustainability in hospitality industry as it relates to hotel development and operations including the environmental, economic and social impact. The notion of sustainable development has prevailed since the late 1980s due to the global concern over the harmful impacts on the world's natural resources caused by economic development (Bruns-Smith et al., 2015). Sustainable development stresses a more balanced concern over the environmental, community and economic needs and interests in the development process, with the aim to satisfy the needs of the present and future generations. In the field of tourism, sustainable tourism development also seeks to meet the interest of host communities and tourists (Lu and Nepal, 2009). According to Hamzah, H. et al. (2015) in their study, the concept of environmental sustainability has become a very serious and profound topic within the tourism and hospitality arena in the past decade. They also commented that this is primarily due to the accelerated pace in which customer needs and expectations are changing.

With due respect to the sustainability of environmental issues, an environmental management systems (EMS) has been found as a standard process for management that dealt with aspects on impact on the environment. It allows organization, to some extent to control and monitor the impact of its activities on the natural environment. This was supported in Wilson and Sasseville (1999) study that EMS required a formal system and database that integrate procedures and processes for the training of personnel, monitoring, summarizing and reporting of specialized environmental performance information to internal and external stakeholders of the organization (Melnik et al., 2002). EMS included a formal write-up on commitment and policy, planning, implementation, measurement and evaluation, review and improvement (Hersey, 1998). While Sheldon and Yoxon (1999) described it as a system of moving data around and organization to enable informed decisions to be made regarding management, used data that the system itself generated and thereby ensuring the business-relevant data would be applied to the management process, including its decision-making process.

The implementation EMS among hospitality industry is vital as the changes are taking place globally in tourist destinations and establishments. A majority of studies concerning EMS in hotels have been conducted in the Western context like in Bohdanowicz (2006), Mensah (2006), Han and Kim (2010), Park and Kim (2014) and Rahman et al. (2012). Although the number of researches in the Eastern context are increasing as in Chan (2008), Hsiao and Chung (2016), Kasim (2009) and Manaktola and Jauhari (2007), little attention is paid to Malaysia. Embarked on that issue, to reduce the negative impact on the environment, the hotel sector worldwide has stepped into a course of implementing environmental management practices or a much formal tool called EMS, an innovation that has been profoundly promoted to offer additional benefits to its adopters (Ustad, 2010). This, among various environmental issues that have been addressed in Malaysia hotel industry is rarely investigated especially among the decision-maker such as the shareholders, owners and managers.

An important question is what determines hotels' environmental activities and managers' commitment in complying with the mentioned environmental practices? Very much aforesaid research and study across a range of disciplines has attempted to identify forces and pressures that motivate and encourage firms to respond to environmental issues. Stakeholders such as customers, local communities, government agencies, public interest groups and even competitors are considered relevant parties that affect environmental decision-making and actions, which sequentially, have impact on the stakeholders (Banerjee, 2002). Organizational capabilities and the availability of resources to implement a proactive environmental management strategy also largely influence managerial decision-making (Banerjee, 2001; Lee and Rhee, 2006). Some research has pointed out that managerial perceptions of various environmental issues such threats and opportunities associated with environmental issues have impacts on corporate environmental responses like in Banerjee (2001) and Lee and Rhee (2006) study. Other research efforts have been made

to identify management's perceived motivations to go green in the hospitality context (Kirk, 1998; Tzschentke et al., 2008). They include financial benefits, improved stakeholder relationships (Kirk 1995, Iwanowski and Rushmore, 1994; Tzschentke et al., 2004), and ethical concerns (Tzschentke et al., 2008). These motivations to go green are inevitably determined by the way the owners and top managers see the environmental issues as well as various internal and external factors that are relevant to their organizations as "managers' personal values can be a motivating factor" for corporate social responsibility (Hemingway and Maclagan, 2004).

Concerning the impact of tourism activities towards environment has been increasing among the stakeholders; unfortunately, most hotels are unwilling to develop EMS probably due to a lack of resources and knowledge claimed Chan and Ho (2006). Academically, despite the increasing significance of environmental management practices, relevant research investigating the preferred kinds of EMS initiatives as well as the underlying motivation influencing the adoption of such practices by hotels in developing countries are sorely lacking especially among the SMEs in Malaysia (Goh and Wahid, 2010). In fact, the dearth of such research is mentioned by researchers such as Campbell (2007) who notes that little attention has been paid to understanding why or why not corporations act in socially responsible ways and Nicholls and Kang (2012) who raise the importance of identifying the underlying motivations for EMS implementations. Malaysia in fact, widely recognized as a major tourism destination, has successfully marketed itself as an ecologically- and culturally-rich country is the country of choice for this EMS-focused study.

In relation to this, researchers have shown that certain hotel chains in Malaysia have proactively adopted some environmentally- and socially-responsible practices (Kasim, 2005, 2007; Kasim et al., 2012). Meanwhile, other hotels have simply adopted selected practices without clear indications of the kinds of motivations that have actually compelled them to do so. In addition, given that corporate environmentalism is the recognition of the importance of environmental issues facing the firm (Banerjee, Lyer and Kashyap, 2003), firms within a common industry context tend to implement similar environmental management strategies since they have similar situational contexts such as relationships with stakeholders and government regulations (Sharma, 2000). Conversely, some studies have also argued that corporate environmental management strategy can be different among companies operating within the same industry which has similar social, regulatory, and public policy contexts (Hart and Ahuja, 1996; Russo and Fouts, 1997; Sharma and Vredenburg, 1998). Hence, why there are differences? Indeed, this research will seek an answer to this question, focusing on managers' environmental commitment and corporate environmental behaviors. Additionally, the increasing number of environmental laws and pressures from the market additionally has raised organizations' and managers' awareness of environmental practices (Jones et al., 2014).

The main problem why this study is carried out is to analyze the success level of SME hotel industry environmental management practices in sustainable environment and ascertain the contributions of the factors of implementation in environmental management program to the SMEs hotels industry as a whole in the emerging market. The intention is to establish the purposes for which SMEs hotels are implementing the EMS, with particular reference to whether they (the owner and manager as decision makers) of different star rating establishments aware the existence of environmental management pressures factors that can give greater impact in the establishment that will encourage them to implement EMS based on different obstacles they are facing.

This paper is one of the very few attempts to investigate EMS in Malaysia – renowned world tourism and nature destination, where the vast majority of hotels are SME hotels. This study hopes to provide insights to the industry, academics and Malaysia government officials regarding ways to enhance the sustainability of Malaysia's SME hotel and tourism industry. Hence, there are four research questions in this study:

1. What are the levels of EM awareness and initiatives implemented in Malaysia's hotel industry?
2. Are there any differences in EM practices between hotels of different star ratings?
3. What are the drivers that encourage Malaysia's hoteliers to adopt green practices?
4. Are there any obstacles that hinder Malaysia's hotels from adopting green practices?

2. Literature Review

2.1 The concept of sustainability

Currently organizations represent a major threat to the natural environment due to the great quantity of waste generated and their elevated consumption of supplies. However, they are also viewed as key players in environmental protection (Fraj et al., 2014). The incorporation of environmental and social measures as part of company policy has been common among large hotel corporations (Kasim 2004; Bohdanawicz 2006), however SME hotels nowadays have also taken the action towards environmental responsibility. Given the importance of the SME in the hospitality industry, the literature review examines the issues on its commitment by the top management on the implementation of EMS and its effects on the performance of the hotel.

The term sustainability has been broadly used in different industries and become ubiquitous when discussing environmental and business issues. According to Goodman (2000) in his study, sustainability is an operating framework that is applicable to reducing the environmental impact of manufacturing companies that produce visibly unclean emissions of waste products as a result of their processes. Although the concept of sustainability was initially applied to the manufacturing industry, its applicability to the service industries quickly became apparent (Goodman, 2000).

Goodman (2000) also indicates that sustainability can be used as a key building block in the service sector to move in new directions and achieve future growth and market success by integrating sustainability concepts into a company's strategic plan. Hobson and Essex (2001) state that it is the responsibility of the tourism operators to safeguard the resources base for tourism. Because the hotel industry is an integral part of tourism, concepts of sustainability are clearly applicable to the hotel sector.

2.2 Environmental sustainability and environmental management initiatives and the hotel industry

EMS began to gain its significance since 1980 and, recently, its popularity is rapidly growing (Mensah, 2006). EMS is related to all of a firm's organizational activities to reduce the firm's negative impact on the environment (Cramer, 1998) and can be described as "a more environmentally responsible and encompassing approach to business decisions and business activities" (Perron, Cote and Duffy, 2006). The environmental management was considered a new and vital aspect of management that was supposed to be adopted by an increasing number of firms (Worcester in Taylor et al., 1994). Many researchers defined environmental management from the point of EMS. While Middleton and Hawkins (1998), described EMS as the "how" day-to-day business operations have been conducted; and considers it as a useful label for the range of programs undertaken by that organization in its efforts to protect, enhance or reduce its impact to the environment. Mensah (2006) defines environmental management as a continuous process adopted through management decisions by monitoring a hotel's activities and appropriate programs and activities devised to reduce the negative environmental impacts.

The first initiative of environmental management in Malaysia commenced formally in 1974 when a regulatory agency known as the Department of Environmental (DOE) was set up. It was during the 1980s, in tandem with the global trend attributed primarily to the alarming scientific findings on environmental degradation, that DOE function was seen as important (Mohammad, 2002). Later environmental issues dominated discussions in many international forums and among the salient outcomes of such discussions were the Langkawi Declaration on Environmental and development at the Commonwealth Heads of Government Meeting (CHOGM) in 1989, the Bio-diversity Conversation during the United Nations Conference on Environment and Development (UNCED) meeting held in Rio de Janeiro, Brazil in 1992 and the Montreal Protocol on the reduction of non-essential chlorofluorocarbon (CFC) usage (Mohammad, 2002). Among the noticeable action is the environmental awareness campaigns carried out by the DOE and other relevant agencies as well as active participation of the non-governmental organizations.

An escalating number of environmental laws and increasing market and consumer pressure have raised corporate awareness of environmental issues and therefore, environmental programmes such as recycling and composting are now steadily increasing throughout the world (Bowe, 2005; Dodd et al., 2001). Businesses, including hotels, have become much more aware of the relationships among environmental performance, scarce resources, public legitimacy, and both short and long-term profitability (Schot and Fischer, 1993).

The hospitality industry has been traditionally considered as one that does not have a great impact on the natural environment compared to such industries as oil and gas, and other consumer product manufacturing industries (Kasim, 2009). However, the hotel industry is a service operated industry and a significant consumer of resources (Bohdanowicz and Martinac, 2003). Hotels operate 24 hours, providing a range of different services and facilities to guests for their comfort and leisure. Hotels can be divided into different categories and segments but the service remains the same, although the range and level of service differs from hotel to hotel. Hotels are not always managed independently but by a management team that runs daily operations. Hotel operations impact the environment in many different ways (Revilla, Dodd and Hoover, 2001). Some researchers like Houdre (2008) and Brown (2006) have made it clear that the major reason for implementing environmental practices is geared towards profitability. While Cotton (2007) believes that the objective of running any business is to make a profit and so it is alarming the number of hospitality organizations that are not adopting green practices in order to drive long-term profitability.

In particular, hotels are facing increasing pressure to pay appropriate attention to environmental issues, as they consume substantial quantities of energy, water, and non-durable products (Chen et al., 2005). Moreover, the hotel industry has an additional stake in protecting the environment, because its business success depends on providing attractive and safe surroundings (Chan and Wong, 2006). With the growing consumer awareness of environmental problems, increasing numbers of hotel customers now look for hotels that follow eco-friendly practices (Manaktola and Jauhari, 2007).

Today, facility managers are putting effort as their main task to address issues of environmental management to improve the organizational effectiveness and well-being (Cooper, 1998). Previous researchers have done researches to address varieties of issues in EMS; including water usage in SMEs operation (Alonso and Ogle, 2010), energy conservation (Chan, 2009) and recycle water and food waste (Wyngaard and Lange, 2013) to name a few.

The EMS is one aspect of environmental quality to which the Malaysian hotel, lodging and accommodation industry is most sensitive. In support of this effort, the hotel industry has a catalyst in recycling and source reduction by applying waste management system practices for example in their operations. According to the Solid Waste Management and Public Cleansing Corporation (SWCorp, 2019) reveals that in 2018 only Malaysian generated a whopping 38,142 tones of water per day, in increase from 19,000 tons of waste a day in 2005. The report added that 44.5 per cent of the waste collected was food

waste, followed by plastic waste (13.2%) and diapers (12.1%). Additionally, the recycling rate was low at a mere 28 per cent, but SWCorp hoped to increase it to 30 per cent by 2020.

Consistent with the study, Brammer, Hojmosse and Marchant (2012) for instance, identified significant pressures and incentives for firms to engage in environmental management, but that these are generally more prevalent among medium-sized companies. In contrast to prior research, compliance with legislation is the least prevalent perceived influence on environmental activities and has a similarly high level of salience for small and medium sized businesses; but larger companies do however perceive marginally greater levels of regulatory pressure compared to very small firms ($P < 0.10$). At the aggregate level, they observe that both medium and small businesses perceive environmental management as being driven by a strategic motive, with the mean of 5.78 and 5.51 for medium and small businesses, respectively. That means that firms, on average, agreed to the set of statements related to their strategic intent of environmental management.

Conversely, concepts such as “reduce, reuse, and recycle” are overwhelming among hoteliers (Meng, 2011) because this has become the ultimate goal of practicing green to some hoteliers like Shangri-la in Malaysia. Such concepts as stated by Kasim (2007) that hoteliers’ recycling and reusing materials are not only practical for responsible solid waste practices but also benefits hoteliers as it could cut down cost. However, Budhiarta et al. (2012) argue that though recycling activity in Malaysia is rising up due to a change in Malaysian’s attitude, the recycling industry still needs to be enhanced unfortunately only few practices it.

In Klang Valley, Kasimu et al. (2012) study found out that hotels had a greater participation in energy management practices by installing occupancy sensor/key card control system in hotel guestrooms and using of energy efficient equipment and products. Meanwhile the airy, cool conditions and the construction of well-ventilated lobbies of majority of the resorts in their study, Siti-Nabiha et al. (2008) indicated the use of natural ventilation because no air conditions were used only fans were installed.

Kasim (2007) suggests that hotels play a vital role especially in the context of a developing nation such as Malaysia where water pollution is a widespread problem due possibly to the open drainage system, which allows the public to simply dispose all sorts of solid and organic waste; and also considering the high amount of water needed for hotel operation. Various researches like in Ogawa (2007) and Achankeng (2004) according to Lim (2010), he concluded that environmental management practices like waste management lacks glamour but it is important to the survival of communities.

However, Siti-Nabiha et al. (2008) discovered that most resorts in the Peninsular Malaysia recycled gray water because many of them had the space to construct a water treatment plant and for some resorts there was no choice due to the fact that there are no sewage facilities in the area thus such treatment plants resulted into huge cost savings. Nee and Wahid (2010) mentioned that government incentives such as ‘green tax’ acts as a positive reinforcement to ensure that companies act responsibly towards the environment.

2.3 Factors and obstacles for hotels to adopt green practices

Financial savings is one of the most influential factors that affect the adoption of green initiatives (Chan, 2008). Energy conservation equipment and initiatives can reduce energy consumption by at least 20 per cent and also reduce energy costs [Ontario Restaurant Hotel & Motel Association (ORHMA), 2008]. Another main driver is growing customer demand, particularly in the Western context (Bohdanowicz, 2005). A survey by Deloitte in 2008 involving 1,000 business travelers in the USA revealed that 95 per cent of the respondents think the hotel industry should be implementing EM (Myers, 2012). Business and leisure travelers in the USA in general were supportive of rooms with energy-efficient light bulbs, refillable shampoo dispensers, towel and linen reuse policies and the use of the key card in the room to control lighting (Millar and Baloglu, 2011). Other drivers to adopt green practices include compliance with the government regulations, and political pressures (Dodd et al., 2001; Tsai et al., 2014) enhance a hotel’s public image

(Rahman et al., 2012) and improve stakeholder relationships (Chan, 2008). Organizations of all sizes and in all industries certainly will be challenged in obtaining International Organization for Standardization (ISO) 14001 certification (Hamzah H. et al., 2015). However, ISO 14001 provides organizations with environmental guidelines to assist them in preparing step-by-step implementation plans to adopt an adequate and effective EMS, conduct proper environmental audits, and successfully become registered to ISO 14001 by overcome the challenges (Hamzah H. et al., 2015).

Inversely, many hotel managers and owners are apprehensive about short-term profitability. For instance, Levy (1997) argues that the high cost of innovation poses difficulties for SMEs to adopt green measures. The low demand from customers is another obstacle for hotels to adopt green practices, especially in the Asian context (Wan, 2007; Rahman et al., 2012). For instance, tourists did not consider staying in a green hotel, despite their concern for the environment (Kasim, 2004), while others had a perception that green hotels cost more to stay in than non-green hotels (Millar and Baloglu, 2011). The lack of government regulations on hotel EMS is another barrier (Mensah, 2006). Furthermore, the perceptions and awareness of managers of environmental protection can influence a hotel's green initiatives, as they are the ones who interpret the environmental issues as opportunities or threats and make the strategic choices to address the issues (López-Gamero et al., 2011). Hotel managers fear that they may not meet their guest's expectations and may sacrifice their levels of comfort by introducing special rules of behavior (Dief and Font, 2010).

2.4 Environmental management in various hotel star ratings and types

Prior studies also point out that the extent and types of EMS practices are varied among different hotel star ratings and types. For instance, Mensah (2006) discovered that more three- to five-star hotels in the Greater Accra region adopted environmental practices than the smaller, budget counterparts because of the lack of human and financial resources, and the lack of green knowledge of the lower star hotels. Chan (2011) reported five difficulties in practicing green management for lower-star and smaller size hotels, including (1) lack of a sense of urgency, (2) ambiguity of EMS standards, (3) lack of qualified verifiers/consultants, (4) conflicting guidance, and (5) inconsistent support. Nicholls and Kang (2012) discovered that chain-affiliated hotels had a more positive view concerning environmental protection than independent hotels (Nicholls and Kang, 2012). Rahman et al. (2012) studied the environmental practices of 166 hotels in North America and reported similar results, explaining that the chain-affiliated hotels could leverage economies of scale through uniform corporate practices.

2.5 The research context of the hotel industry's environmental management in Malaysia

In Malaysia, according to Ann et al. (2006) there are no clear or detailed environmental requirements on sustainability practices and implementation for accommodation industries. However, Ann et al. (2006) stated in their research that in Malaysia, as in other countries with diverse economies, the ISO 14001 standard has thrown down a challenge to businesses, especially in environmentally sensitive industries such as heavy manufacturing, chemicals, semiconductors, mining and agriculture. The challenge is for them play a proactive role in the instigation and/or enhancement of the organization's EMS.

The goal of the ISO indicated by (Quazi et al., 2001) is to develop standards on a worldwide basis to allow commerce to transcend national boundaries without creating trade barriers. The standards are process oriented; they do not establish goals or limits. Instead, they establish management system guidelines that help organizations ensure compliance with customer, industry, or regulatory limits. With the establishment of International Standards for Environmental Management i.e., EMS, ISO 14001, hotel industry worldwide is taking advantage of implementing these standards that are comparable across the world (CTI USAID, 2002).

According to Seiffert (2006) implementation of an EMS is an important tool for environmental management because it is an instrument that functions at the micro especially when the participation of SMEs is considered. Conversely, to maintain Malaysia's image as a family-oriented holiday destination, therefore, it is relatable to ensure good hotel service and facilities. Hence, the government needs to impose tighter criteria for hotel ratings to ensure better quality hotel service and facilities.

It is worth to point out that the concept of EMS is still relatively new for some hospitality organization and has a multitude of meanings and connotations according to some authors like Zainuddin and Yusnita (2016) and Buffa et al. (2018). In fact, Brackley (2007) in his study commented that sustainability is about working in a way that neutralizes an organization impact on the environment and believes that sustainability is about not sacrificing the future for our needs today. Adding to it, Blake (2007) believes that eco-friendly, eco-tourism, sustainable tourism and responsible travel share the same principal that hotels and resorts need to give back more to their community and environment that they take away. While Pizman (2008) believes that many hospitality organizations are not interested in environmental sustainability for altruistic or ethical reasons but are purely investing in environmental practices for profitable reasons.

Researchers like Houdre (2008) and Brown (2006) have made it clear that the prime reason for implementing environmental practices is geared towards profitability. While Cotton (2007) believes that the purpose of running any business is to make a profit and so it is alarming the number of hospitality organizations that are not adopting green practices in order to drive long-term profitability. This suggests that there are barriers and obstacles with regard to the implementation of environmental practices in the hospitality industry.

3. Research Methods

This study adopted a mixed-research method. Data were collected from questionnaire surveys with hotel managers in Malaysia and face-to-face interviews with them.

3.1 Research design for survey

A questionnaire was designed following the comprehensive literature reviews. The first section identified the background information of the participating hotels. The second section investigated the hoteliers' environmental awareness. Participants were requested to indicate their answers to statements rated on a five-point Likert scale (ranging from 1, disagree strongly, to 5, agree strongly). The third section examined whether the hotel had any initiatives regarding energy conservation, water conservation, waste management and environmental purchasing. These initiatives are the major concern of green hotels and were the focus of the prior studies (Hsiao and Chung, 2016; Mensah, 2006; Rahman et al., 2012; Wan, 2007). As Tsai et al. (2014) argues, other areas such as pollutant emissions and noise were often not the major focus of hotel EMS studies, as managing well in areas such as energy conservation, water conservation and waste management would ultimately reduce greenhouses gas, environmental pollution and control the noise level. The items for the second and third sections were based primarily on the studies by Bohdanowicz (2006), Kasim (2009), Mensah (2006), Wan (2007) and the best practices guide by IHEI (2002). Tick boxes were used and some open spaces were given for participants to provide additional information. Section four asked further questions related to the implementation of EMS and included an open-ended question to encourage respondents to add further comments. Respondents had the opportunity to list other initiatives not mentioned in earlier sections through this question: "Please list any other environmentally friendly practices not mentioned above".

3.2 Pilot test

The questionnaire was pilot tested with five hoteliers using snowball sampling techniques to test its reliability before disseminating it to the participants. Two major adjustments of the questionnaire were made after the pilot tests. First, terms like NGO were spelled out completely, and familiar English words were used. Second, the questionnaire was translated into Bahasa Malaysia for the convenience of respondents who preferred to answer the questionnaire in Bahasa Malaysia.

3.3 Population and sample size

All the hotels on the MOTAC list during the research period were invited to participate in the survey. According to Tourism Malaysia statistics (2017), there are 1695 qualified and registered SME hotels throughout Malaysia. The area covers the whole Malaysia including Sabah, Sarawak, and Federal Territories of Kuala Lumpur, Putrajaya and Labuan. The statistics of total number of hotels in Malaysia concluded simultaneously with the definition of SME hotels based on SME Corporation Malaysia.

This study was conducted among various types of SME hotel accommodations in Malaysia. This study targeted a population, which is geographically spread over a wide area in Malaysia. Thus, to avoid travelling, questionnaires distributed using post/email and online survey. Nonetheless, because of in addition to cost and efficiency considerations, an email surveys preferable to increase the response rate in some instances compared with a telephone survey.

Random sampling is almost always a preferable sampling method in which the list of the target population and accessible population must be identified and drawn randomly to form the sample size of a study (Fraenkel et al., 2011). Sampling was confined within the listed and registered SME hotels with Malaysia Ministry of Tourism and Culture only as the body is the one that generate the tourism and hospitality data for the industry. Hence, the identified SME hotels were contacted through managers and owners who identified as decision maker for the organization. In order to achieve the research objectives, the population sample unit will be furthered defined as all SME hotel managers, including general managers or owner and departmental managers – organization decision makers.

The distributed questionnaires totaled to 1695 hotel managers throughout Malaysia and the minimum sample size required for data analysis is 313 according to Krejcie and Morgan (1970) and Hair et al. (2006). However, collected sample was 252; about 80 per cent of the 313 sample sizes required were randomly selected using SPSS random selection.

3.4 Research design for interview and data collection

The research instrument used for this study was questionnaire, which is considered to be the most preferred research instrument for survey approach (Altinay and Paraskevas, 2008). Respondents were asked whether they would like to participate in an online survey and then a face-to-face interview to provide further insights on the subject. A cover letter together with a questionnaire (in English and Bahasa Malaysia) was sent to the managers of the 1695 hotels inviting them to participate in the survey. Data for this study were collected from May 2018 until July 2018. Data were collected through an online user administered questionnaire. This method was chosen for two main reasons:

- i. The study sites covered a wide geographic range and it was not feasible to travel to each state to administer surveys or to recruit local researchers to do so and this indirectly save the cost of travelling.

- ii. Online surveys have been found to have a quicker return rate and, in some instances, the same or significantly higher response rate than mail surveys, particularly for groups that frequently use the email or the Internet.

Departmental managers/owners were invited to participate in the survey by email, whom then asked if they are willing to participate in a face-to-face interview. To ensure that the email reached the intended target, email addresses for general managers or owners were confirmed through telephone calls to the hotel. Since previous studies like in Kaplowitz et al. (2004) and Schaefer and Dillman (1998) have shown better response rates when advance notification was made, a pre-notice was first emailed to alert the hotelier to expect an invitation. This pre-notice also served to test the validity of the email addresses and those that were found to be invalid were removed from the database. Subsequently, two email reminders were sent. One reminder was sent in June and one more were sent in July 2018. Each reminder contained the URL link to the questionnaire. Given the time of year when the survey commenced, the decision was taken to send the second reminder after a three-week interval. It was felt that this would help to recruit persons who may have been away for longer than one or two weeks.

The first stage of research included gathering information on hotel details, which was completed by using the Tourism Malaysia website as a sample frame. The participating hotels initially will be contacted through e-mail and also by phone to obtain their consent to participate in this research. Eleven respondents (4.36% of the 252 survey respondents) who completed the questionnaire indicated their willingness to participate in the interview and provided contact details. Of these 11 respondents, 8 were males and 3 were female. Six were hotel managers, 3 were heads of an operation department and 2 were heads of maintenance department. All of the respondents had obtained university degree educational level. The researcher then called them to arrange for the interviews at the respondents' office. The participants were requested to elaborate and provide more details regarding their hotel background, their attitudes toward green practices in the hotel, their hotels' environmental initiatives and the reasons and obstacles to adopt green practices.

During the interviews, the interviewer did a self-introduction and explained the aim and purpose of the interview. After that, the interviewees were asked whether they could permit the interview to be recorded. Most of the respondents did not feel comfortable to have the conversations recorded, so extensive notes were taken. Details of the interviews were written up right after each interview so that important information was not forgotten. The interviews were conducted using both English and Bahasa Malaysia. For the interviews conducted in Bahasa Malaysia, data were later transcribed verbatim and translated into English. The duration of the interviews ranged from 45 minutes to 2 hours.

3.5 Data analysis method

Descriptive statistical analysis was used to interpret the data collected from the questionnaire. Data collected from interviews were categorized and coded. All the interview transcripts were carefully read many times to ascertain prospective groups of significant codes and themes. To ensure accuracy and data reliability, two professors were invited to assist in identifying aspects in the transcripts that might have been misinterpreted or overlooked. Eventually, the data collected from the quantitative surveys and qualitative interviews were mixed with the aim to help answering questions that could not be answered by a single approach alone (Creswell et al., 1996). The two sets of data were connected by embedding one data set (qualitative) within the other (quantitative) so that one type of data provided a supportive role for the other data set (Creswell et al., 1996).

4. Results

4.1 Participating hotels

Table I shows that a majority of participating hotels were mid-priced hotels (59.5%), followed by budget/economy hotels (40.5% each). The distribution is quite representative of the proportion of respective hotel stars in Malaysia. Most of the hotels are independently owned and self-managed (71.4%), managed by a management contract (16.7%), managed by chain (9.5%) and managed by a franchise agreement (2.4%). Out of these hotels too, the majority of the hotels are supplying less than 50 rooms (40.5%), 100 rooms or more (35.7%) and between 51 to 99 rooms (23.8%). Majority of the responded hotels also showed the occupancy rate of between 71-80% occupancy rate with the percentage of 40.5%, while none of them has occupancy rate below than 50%.

4.2 Hoteliers' awareness of environmental management

Table I also shows that in general, respondents had high levels of awareness of EMS in their hotels. A majority of respondents (42.9%) commented that their establishments has been practicing the environmental initiatives for the past 3 years and above, while another 26.2% shared that they have started the initiatives between 1 to 2 years ago, 16.7% since few months ago and 14.3% between 5 months to 1 year.

Customers generally like to stay in neat, clean and environmentally friendly hotels. Higher star hotels in general spend more resources in this aspect. Going green not only helps them to reduce cost and project a higher service quality standard, but also makes their employees happier at work as they feel proud of working there. Based on the interview, the same hotel manager adding that *“Adopting green practices brings us a lot of benefits. In 2011, my hotel received the gold award in a competition held by the Malaysia Ministry of Tourism and Culture because we consumed 10 per cent less electricity than the previous year. That award helped us to gain a lot of publicity since”*.

4.3 Environmental activities implemented in hotels

Of the 11 respondents, only one respondent (1.1%) revealed that their three-star hotel had not implemented any environmentally friendly practices, due mainly to the financial constraints and the fear that implementing green practices would result in a negative evaluation in terms of customer experience as most of their customers are not green hotel goers. Table III summarizes the environmental initiatives adopted in Malaysia's SME hotels. The five most commonly adopted initiatives were using energy efficient light bulbs (85.7%); detecting and repairing leaking facilities (66.8%), reducing unnecessary packaging for any products (85.8%), reducing (either sell, donate or recycle) old durables (75.5%) and staff training on environmental management practices (76.0%).

4.4 The five most commonly adopted green practices in hotels

- *Using energy efficient light bulbs.*

As mentioned earlier, 85.7 per cent of the respondent hotels used energy efficient light bulbs as part of the energy conservation effort in various areas. Some hotels also used energy saving lighting in their lobbies, restaurants, advertising signs, and parking lots and in the office. As one interviewee said:

“More than 90 per cent of the lighting in my hotel used power-saving light bulbs” (R26: two-star). Lightings that could not be changed to energy efficient ones mainly were due to the need to create special

effects in the higher star hotels. As another manager revealed, “Seventy per cent of the lightings in my hotel are using energy efficient bulbs. But for the chandelier, it’s hard to use them because of the high requirement of lighting effect” (R3: three-star).

- *Detecting/repairing leaking facilities*

About 66.8 per cent of respondent hotels had introduced an active system to discover and fix leaking facilities including toilets, faucets and showerheads either by the housekeeping staff or an engineer. The water conservation effort was generally considered as one of the least costly to introduce. The respondent of two-star rated hotel manager said that “Whatever we do, we have to think of the costs, profits and loss. We try to use the easiest, simplest and least expensive way to reduce energy and water consumption. Checking and fixing the leakages are important”. While another three-star rate hotel manager commented that “Checking and fixing the leakages can lessen the harms to our customers and help us to reduce cost. The checking system put in place last year allowed us to save sum amount of huge ringgit in water usage”.

- *Reducing unnecessary packaging.*

In total, 85.8 per cent of the respondent hotels in Malaysia reduced packaging to save paper, plastic bags and materials. A manager of three-star hotel said: “Previously we used two plastic bags to contain a lunch box. Currently, we find that one plastic bag is enough to hold it and consequently, we have a policy to give only one since then”. Another manager of two-star rated hotel added: “It is too costly for a small hotel like us to install EMS and equipment to decompose waste. Instead, we generate less waste by using fewer wrapping papers and plastic bags. Since this new policy was introduced three years ago, we have cut nearly 50 per cent in costs”.

- *Donating or recycling old durables*

In total, 75.5 per cent of the participating hotels introduced waste management; the most commonly adopted strategy was to donate, sell or recycle their old durables. The beneficiaries for the old furniture, household appliances, bed sheets and towels and old uniforms were the churches, charitable organizations or the center for the elderly. These three comments were shared by the respondents. The first one from a three-star rated hotel manager stating that “The usable old furniture from the hotel will be returned back to the office. If not usable, we just dump them or at least rethink to recycle them. Old sheets and towels are used as rags, like for wiping the wet floors or recycle to make another product usable for other purposes”. While another three-star rated hotel manager added that “Our hotel donates old furniture to non-profit organizations. If there are still some left, our staffs are welcome to take them home. Old household electrical appliances are sold cheaply to the hotel staffs provided they are safe to be used. While old bed sheets, towels and curtains are used for cleaning in our hotel”.

- *Educating and involving employees in environmental management practices*

In total, 76 per cent of the respondent SME hotels in Malaysia involved their employees in the EMS actions by training them to waste management initiatives, energy management training (55.5%) and water management training (58.5%). This method is the most cost-efficient way to save energy and is essential to gain the employees’ support in adopting green practices in the hotels. For instance, this three-star rated hotel manager quotes that “The moment the new staff hired, they will equip with a training programme session related to EMS”. Others (two-star) added, “Various signs are posted everywhere to educate our staff on the important of environmental practices”. Additionally, this three-star rated hotel manager

commented that *“Our hotel also conducts e-survey to allow our employees to provide suggestions on hotel environmental protection”*.

4.5 The three least adopted green practices

- *Using solar lawn light practices*

Only 60 participating hotels (23.81%) were using solar lawn lights: one is a two- and three-star hotels. The system was believed to be able to help reduce utilities costs and upgrade the hotels' image. As one hotel director of two-star hotel said *“LED solar lawn lights are installed at our restaurant and coffee house. These lights absorb solar energy in the day time and transform it into electricity to support the lighting during the evening time. Our image has been upgraded as well”*.

- *Reusing waste water activities*

Only 33.8 per cent of respondent hotels in Malaysia have a waste water reuse program. The most common ways they adopted were using the water from the air conditioner cooling tower and the swimming pool for toilet flushing (13.3%) and for irrigation (20.5%). The interviewees of three-star hotel said that *“We recycle water from the air conditioner cooling tower and swimming pool. The recycled water provides almost half the amount needed for toilet flushing per day”*. While others commented that *“We recycle the water from air conditioners and from rain. The result is very impressive. The reused water helps to reduce up to 15 to 20 per cent of our regular water consumption on a daily basis”*. Another three-star hotel uses rain water to water their garden and cleaning the public pedestrian areas.

Besides, below are some of representative quotes from the interviewees regarding the reasons for not having a water reuse program such as from a two-star rated hotel manager stating that *“Our hotel is 20 years old, so our facilities are relatively very old. We do not install our waste reuse system but hopefully will have it installed later step-by-step in future”*. Additionally, another three-star rated hotel manager stated that *“We do not have our waste water reuse system. It needs a lot of cost and investment. The government buildings are built with this system and they have the ability to do so”*.

- *Decomposing leftovers to recycle waste activities*

Only 15 percent of the two-star hotels practice to decompose their food waste in Malaysia. This practice requires the hotels to invest a significant amount in terms of purchasing a machine and designating staffs to handle the waste every day. The restaurant of the Frangipani Hotel, Langkawi for instance uses the decomposed food waste for the garden to grow their own vegetables and spices. Also, being a private-owned SME hotel, it becomes a role model for other hotels, showcasing ways to reduce food waste efficiently.

4.6 Drivers and barriers to adopt green practices

Most respondents (33.3%) ranked cost savings as the main driver for EMS. In particular, respondents believed that green practices could help their hotels to save costs in energy and water consumption. The second and third drivers were to comply with the government regulations and laws (32.2%) and to respond to the demands and needs of customers (29%).

In regard to the barriers for green practices in hotels, a majority of the respondents indicated the lack of government legislation and enforcement (87.5%), financial constraints (78%) and difficulty to balance between EMS and guest experience (59.3%). Although there is growing demand for green hotels from the leisure travelers who are aged between 25 and 50 years, the preferences of many other travelers stressed overgenerous experience and service convenience, and they appear to have little green and sustainability mindset. The following are the typical quotes from the respondents at the managerial level:

“There are very few government laws requiring us to go green such as noise control, food and solid waste management. Adopting green or not pretty much depends on their corporate social responsibility and their financial situation” (R8: three-star).

Another three-star rated hotel manager quotes that *“Customers are paying sufficient amount of money to stay in a hotel and demand for a more decent and comfortable environment”*. This supported by another three-star rated hotel manager quotes that *“There were several occasions where we received complaints from our VVIP/VIP customers, who are mainly the politician and some high-ranking CEOs about our green policy. They were not happy because they have to make a request to change the bed sheet and towels every day”*.

5. Conclusion

5.1 Environmental awareness and initiatives

The hotel managers have high levels of environmental awareness. Apart from the awareness that adopting green in hotels could bring economic benefits and reduce the negative impacts to the natural environment, hoteliers saw the importance of adopting green for a satisfied workforce and gaining more competitive advantage. A good working environment is especially important for Malaysia because of the city's low unemployment rate and when hiring and retaining hotel employees becomes difficult and challenging.

5.2 Environmental management initiatives implemented

A large majority of the SME hotels in Malaysia (93.6%) have adopted at least one or two minimum green practices in five main areas: using energy efficient light bulbs, detecting and repairing leaking facilities, reducing unnecessary packaging for any products, reducing (either sell, donate or recycle) old durables and staff training on environmental management practices. The three least adopted green practices were grey water for irrigation and toilet water flushing, decomposing leftover food and other solid waste. Cost is their major consideration in implementation. Most hoteliers are more willing to adopt simple and less costly approaches in managing their environmental program and tend to avoid investing a lot of money to install systems and/or machines, unless there are government regulations and requirements to do so. Some is considering when there is competition among their peer hoteliers. Most hotels have strategies and initiatives to reduce energy (55.5%) and water consumption (58.5%) but the highest on waste management (76.0%).

5.3 Environmental management commitment among managers from different hotel stars

The lower star hotels (one-star) did not use solar lawn lighting to save energy or non-disposable containers to reduce waste due mainly to the high costs involved (only 23.81% of these SME hotels contributed). Moreover, none of the one- and two-star hotels had a delegated staff or team accountable for EMS or to actively seek information about green practices (13.5% and 40.8% subsequently). Furthermore, unlike the larger, newer and higher-class hotels that have built in the physical spaces and other supporting networks for large-scale systems and installation of various equipment that smaller hotels have no such

privilege. These findings echo earlier findings where lower class and smaller size hotels have more difficulties in going green than the higher class and larger hotels (Chan, 2011; Mensah, 2006; Nicholls and Kang, 2012) due mainly to the lack of resources and professional advice.

5.4 Drivers and obstacles to adopt green practices

The four main drivers for SME hotels in Malaysia to adopt green practices are cost saving, compliance with the government regulations and laws, to respond to the demands and needs of customers/consumers as well as competition among other competitors. The three main barriers to adopting green practices are the lack of government legislation and enforcement, financial constraints and difficulties in balancing between the need for EMS and the customers' experience. Additionally, although the hoteliers understand that there are increasing customer demands for green hotels, they have to ensure that the green practices they adopt do not impose high costs and have minimum negative influence on the customers' experience.

5.5 Contributions of the study

This study makes several contributions to the hospitality literature. First, it provides more updated information on the EMS in Malaysia's SME hotel industry and provides insights into ways to enhance the environmental sustainability of the industry. Second, although the findings of this study are somewhat similar to the prior research – in that lack of government enforcement and financial considerations are the major constraints to adopt green practices, and lower star hotels have lesser resources to do so (Hsiao and Chung, 2016; Kasim, 2009; Manaktola and Jauhari, 2007), this study offers more explanations of the EMS practices adopted by Malaysia's SME hotels, arguing that their current practices and barriers are associated with their customer base and the local municipal and local tourism development offices.

5.6 Implications

The Malaysia SME hotels industry contributes significantly to the degree of environmental sustainability and the sustainability of the city's tourism industry. It is necessary to implement some measures to reduce the negative impacts. The academic significance of the study lies in the empirical examination of the dimensions of the experience, in scheming up the conceptual boundaries of the experience-centric management, and, last not least, in examining the tourism experience from the supplier's side with quantitative empiricism. The survival of the Malaysian accommodations sector depends to a large extent on the quality of the natural environment. Therefore, the accommodations sector has an important role in protecting natural resources. One way to enhance protection is for properties to implement environmental management. Additionally, the sector's survival depends on its economic sustainability and the outcomes of EMS proposed by this study emphasize that adopting this innovation makes sound business sense.

Constraints to implementing environmental management were identified, several of which were seen to influence the level of environmental management implemented. The influential constraints were lack of capital; lack of time; potential benefits not apparent; no access to technology; lack of know-how; and EMS is not necessary. While these and other constraints may have prevented some hotels from implementing environmental management, the fact that 67 per cent of the respondents had implemented EMS attests that such constraints were not insurmountable.

Based on the results of this study, it is recommended that Malaysian Standards for ISO14001 and the government, i.e. Ministry of Energy, Green Technology and Water of Malaysia for instance should continue to encourage and where possible facilitate the environmental management in hotels.

Additionally, it is recommended the SME hotels: 1) Should start environmental management practices at the most comfortable level. They should also consider a more advanced level of EMS if basic EMS has already been implemented. 2) Additionally, they should work collectively to access leverage on training or work with hotel association such as Malaysia Association of Hotels (MAH) to do such. 3) Apart from that. They could think outside of the box, to compare with other competitors and tap resources which may be often overlooked, and 4) Finally, to consider membership in any national and international environmental and safety related associations.

While for the policy-makers, it is recommended: 1) Partner with other sectors or industries to conserve resources such as industrial, manufacturing, services and so on. 2) To work with the industry to implement infrastructural changes (for example the recycling activities) which will also beneficial the local community, and 3) Finally, to consider creating incentives such as tax credits for properties to adopt and implement environmental best practices to attract more SME hotels participating and implementing the EMS.

5.7 Limitations, delimitation and further research

The response rate to the survey, though acceptable, was somewhat lower than anticipated. While the timing of the study did contribute to this limitation, it was also felt that fewer non-adopters may have responded to the survey because of the misperception that it was aimed at hotels that had implemented environmental management. It is possible that the low response rate and the type of respondents influenced the results of the study. The study was also limited in that much of the focus was on properties that had adopted some level of environmental management. Therefore, there was a low level of variation between the responses to the questionnaire. Also, the characteristics of responding hotels were very similar. This relative homogeneity may have been the underlying reason why characteristics were not found to be predictors of the adoption of the innovation under study.

Given the response rate to the survey, an attempt was made to determine whether nonresponse bias existed. However, extensive analysis on non-respondents proved difficult since the identities of most respondents were anonymous to the researcher. On the other side, this study targeted general managers and owners of hotels because they tend to make major decisions within a property. However, implementation of environmental management, particularly at advanced levels, requires input from most if not all personnel. Therefore, this study may have primarily captured one perspective of environmental management.

This study was restricted to hotels within the Malaysia regions. This was intentional to ensure the study manageable. While this study may offer insight into environmental management, the findings should be considered within the context of the Malaysia. While this study has contributed to the literature in various ways, it did not address the concern of cross-sectional studies, which offer a snapshot of a fixed point in time. Given the dynamism of the accommodations sector and the tenet of continuous improvement inherent in environmental management, a longitudinal study capturing the same or similar data is recommended. Such a study could look at the continued diffusion of environmental management, whether the proportion of adoption within the four levels changes, and differences to motives, facilitators, constraints and outcomes over time.

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A. Appendix

A.1. **Table I:** Information of participating hotels

Participating hotel information	No. of respondents	(%)
<i>Rating</i>		
• Mid-Price hotel	150	59.5
• Budget / economy hotel	102	40.5
<i>Type of ownership</i>		
• Independently owned, self-managed	180	71.4
• Independently owned, managed by a franchise agreement	6	2.4
• Independently owned, managed by a management contract	42	16.7
• Chain owned, managed by the chain	24	9.5
<i>Size</i>		
• Less than 50 rooms	102	40.5
• 51 – 99 rooms	60	23.8
• 100 or more rooms	90	35.7
<i>Average Occupancy</i>		
• Below than 50%	0	0
• Between 51 – 60%	6	2.4
• Between 61 – 70%	90	35.7
• Between 71 – 80%	102	40.5
• Between 81 – 90 %	54	21.4
• Between 91 – 100%	0	0
<i>Length of environmental initiatives started</i>		
• Few months ago,	42	16.7
• Between 5 months to 1 year	36	14.3
• 1 year to 2 years ago	66	26.2
• Above than 3 years ago	108	42.9

A.2. **Table II** Information of participating hotels' manager

Participating hotels' manager information	No. of respondents	(%)
<i>Current Position</i>		
• Departmental Manager / Head	90	35.7
• Operation Manager	90	35.7
• Administrative Manager	24	9.5
• Financial Manager	24	9.5
• F&B Manager	6	2.4
• Owner	18	7.1
• Others	0	0
<i>Number of years with the hotel</i>		
• Less than 1 year	24	9.5
• Between 1 year to 2 years	24	9.5
• Between 2 years to 3 years	78	31.0
• Between 3 years to 4 years	78	31.0
• More than 4 years	48	19.0
<i>Number of years in hotel industry</i>		
• Less than 1 year	12	4.8
• Between 1 year to 5 years	66	26.2
• Between 5 years to 10 years	126	50.0
• Between 10 years to 15 years	48	19.0
• More than 15 years	0	0
<i>Most experience department in hotel industry attachment</i>		
• Sales and Marketing	18	7.1
• Food and Beverage	114	45.2
• Front Desk	18	7.1
• Housekeeping	12	4.8
• Human Resource	60	23.8
• Finance	24	9.5
• Engineering	6	2.4
• Others	0	0
<i>Age</i>		
• Under 30	0	0
• Between 31 – 40	84	33.3
• Between 41 – 45	90	35.7
• Between 46 – 50	78	31.0
• Between 51 – 55	0	0
• Over 56	0	0
<i>Gender</i>		
• Male	168	66.7
• Female	84	33.3
<i>Educational Level</i>		
• Some high school	0	0
• Diploma graduate	24	9.5
• Bachelor Degree	114	45.2
• Master's Degree	114	45.2
• Post Graduate	0	0

<i>Marital Status</i>		
• Single	48	19.0
• Married	180	71.4
• Widowed	6	2.4
• Divorced	18	7.1
• Separated	0	0

A.3. **Table III:** Environmental initiatives implemented in Malaysia SME hotels

Activities	Yes	Participating hotels		
		1 Star	2 Star	3 Star
Energy conservation				
Energy efficient light bulb use	85.7%	/	/	/
Solar light systems use	23.81%	X	o	o
Lighting control system	65.0%	/	/	/
HVAC controls in guest room	40.3%	/	/	/
Water conservation				
Linen reuse options	87.8%	/	/	/
Water conserving fixtures	83.5%	/	/	/
Active system to detect and repair leaking facilities	66.8%	/	/	/
Wastewater reuse program:	33.8%	o	o	o
irrigation	20.5%	X	o	X
toilet flushing	13.3%	X	o	X
Waste management				
Non-disposable container use	23.3%	X	o	o
Packaging reduced	85.8%	/	/	/
Leftover (allow employees brings home)	13.3%	o	X	o
Leftover (decomposed)	15.0%	o	X	o
Old durables (sell, donate and recycle)	75.5%	/	/	/
Active recycling system	70.0%	/	/	/
Green purchasing				
Having special measure in purchasing department	58.8%	X	o	/
Green Purchase	38.5%	X	o	o
Staff training				
Energy management	55.5%	o	o	o
Water management	58.5%	/	/	/
Waste management	76.0%	o	o	o
Green management				
Someone to in charge of environmental management	13.5%	X	X	o
Take initiative to gain green hotel information	40.8%	X	X	o

Notes:

/: means over 50% hotels have adopted the green practice;

O: means less than 50% hotels have adopted the green practice;

X: means no hotel have adopted the green practice