



**Ministry of Education, Youth, and Sport  
The University of Cambodia  
The Tony Fernandes School of Business**

**Green Business Standard: Case Study of  
Implementation in Hotels in Cambodia**

**A Doctoral Dissertation**

*Submitted to The Tony Fernandes School of Business in Partial  
Fulfillment of the Requirements for the Degree of Doctor of  
Philosophy in Business Administration*

**POR NARITH**

**2021**



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Dr. Kem Sambath



#### **Member**

Dr. Do Nara



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Dr. Vin Pheakdey





# **មូលន័យសង្ខេប**

## **ABSTRACT IN KHMER**

ការស្រាវជ្រាវនេះមានគោលបំណងចំនួន ៣ គឺ(១)ដើម្បីវាយតម្លៃពីកំរិតនៃការអនុវត្តន៍ស្តង់ដារអាជីវកម្មបៃតងសណ្ឋាគារ(២) ដើម្បីកំណត់ប្រសិទ្ធផល និងប្រសិទ្ធភាពនៃការអនុវត្តន៍ស្តង់ដារអាជីវកម្មបៃតងសណ្ឋាគារ និង (៣)ដើម្បីកំណត់កត្តាដែលជះឥទ្ធិពលដល់ការអនុវត្តន៍ស្តង់ដារអាជីវកម្មបៃតងសណ្ឋាគារ។ តំណាងសណ្ឋាគារចំនួន ១៣២ នាក់ តំណាងមន្ទីរទេសចរណ៍ចំនួន ៥ នាក់ និង អ្នកដែលធ្លាប់ស្នាក់សណ្ឋាគារចំនួន ១១៩នាក់ត្រូវបានសម្ភាសន៍ និង ប្រមូលព័ត៌មាន។

ស្តង់ដារអាជីវកម្មបៃតងត្រូវបានអនុវត្តកំរិតខ្ពស់នៅក្នុងសណ្ឋាគារ រួមមានការប្រើប្រាស់ថាមពល ការប្រើប្រាស់ទឹក និង ការគ្រប់គ្រងគុណភាពខ្យល់ ខណៈដែលស្តង់ដារបៃតងដែលត្រូវបានអនុវត្តកំរិតទាបនៅតាមសណ្ឋាគាររួមមាន ការលើកកម្ពស់ការប្រើប្រាស់ផលិតផលបៃតង ការចូលរួមការអភិវឌ្ឍន៍សេដ្ឋកិច្ចមូលដ្ឋាន ការលើកកម្ពស់បរិស្ថាន និង វប្បធម៌មូលដ្ឋាន។ ការអនុវត្តន៍ស្តង់ដារបៃតងបានកាត់បន្ថយការប្រើប្រាស់ទឹក ថាមពល ថ្លៃដើម បង្កើននូវចំនួនភ្ញៀវ និង ប្រាក់ចំណេញរបស់សណ្ឋាគារ។ ការអនុវត្តន៍ស្តង់ដារបៃតងសណ្ឋាគារត្រូវបានព្យាករណ៍ដោយកត្តាមួយចំនួនដូចជា បទប្បញ្ញត្តិរបស់រដ្ឋាភិបាល ការទទួលបាននូវអត្ថប្រយោជន៍ ការគាំទ្ររបស់អតិថិជន ឥរិយាបថអ្នកគ្រប់គ្រង/ម្ចាស់សណ្ឋាគារ និង ការគាំទ្ររបស់បុគ្គលិក។

ពាក្យគន្លឹះ៖ បៃតង ប្រសិទ្ធផល ប្រសិទ្ធភាព កត្តាជះឥទ្ធិពលនៃការអនុវត្តន៍ស្តង់ដារបៃតង



## **ABSTRACT**

The research aims to assess the extent of Green Business Standard implementation in hotels, determine the efficiency and effectiveness of Green Business Standard implementation in hotels, and define the influencing factors affecting GBSI in hotels.

The research was conducted with 132 hotel representatives from six provinces and one municipality, five DoT officials, and 119 people who have experience of staying in hotels. Both quantitative and qualitative approaches were employed. To analyze the data, SPSS statistical tools were employed, including simple regression, multiple regression, and descriptive statistical tools. Content analysis was employed to analyze qualitative data.

First, the Green Business Standard was implemented to a high degree in hotels regarding energy consumption with the use of efficient energy equipment, water consumption through efficient water materials and equipment, and air quality management, while the GBSI in hotels is low regarding the promotion of green products and local economic development, environmental protection, and local cultural promotion. Second, the practice of GBSI in hotels reduced water use, energy consumption, costs, and guest and profit margins. Third, the GBSI in hotels was predicted by customers' support, government regulations, perceived benefits, hotel managers' or owners' behavior, and staff support.

Keywords: green business standards, efficiency, effectiveness, and influencing factors of GBSI in hotels



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## **LIST OF ABBREVIATIONS**

ADB	: Asian Development Bank
AM	: Ante Meridiem
AM	: Ante Meridiem
ASEAN	: Association of Southeast Asian Nations
BF	: Barrier Factor
CASDP	: Cambodia Agricultural Sector Diversification Project
CCA	: Cambodia Constructor Association
CDC	: Cambodia Development Council
CPF	: Car Park Facility
CPF	: Car Parking Facility
CSO	: Civil Society Organization
CSR	: Corporate Social Responsibility
CTRS	: Cambodia Tourism Rating System
EDC	: Electric Du Cambodge
EE1	: Efficiency and Effectiveness (Water Reduction)
EE2	: Efficiency and Effectiveness (Energy Reduction)
EE3	: Efficiency and Effectiveness (Cost Reduction)
EE4	: Efficiency and Effectiveness (Guest Increase)
EE5	: Efficiency and Effectiveness (Profit Increase)
EIA	: Environmental Impact Assessment
EMS	: Environmental Management System
EU	: European Union
FiA	: Fishery Administration
GBSI	: Green Business Standard Implementation
GDP	: Gross Domestic Product
GGGI	: Global Green Growth Institute



GGRM	: Green Growth Road Map
IF	: Influencing Factor
IIED	: International Institute for Environment and Development
ISO	: International Standard Organization
JV	: Joint Venture
KHR	: Khmer
KTOE	: Tone of Oil Equivalence
LED	: A light-emitting diode
LPG	: Liquefied Petroleum Gas
MA	: Monthly Average
MAFF	: Ministry of Agriculture, Forestry and Fisheries
MEF	: Ministry of Economy and Finance
MEF	: Ministry of Economy and Finance
MF	: Motive Factor
MIME	: Ministry of Industry, Mines and Energy
MoE	: Ministry of Environment
MoT	: Ministry of Tourism
MOWRAM	: Ministry of Water Resources and Meteorology
MRC	: Mekong River Commission
MRD	: Ministry of Rural Development
MV	: Moderate Voltage
MW	: Megawatt
MW	: Megawatt
NEDARC	: National EMSC Data Analysis Resource Centre
NGGR	: National Green Growth Roadmap
NGO	: Non-Government Organization
NPGG	: National Policy on Green Growth



NSPGG	: National Strategic Plan on Green Growth
OECD	: Organization for Economic Co-operation and Development
OECD	: Oregon Economic and Community Development Department
PM	: Post Meridiem
PM	: Post Meridiem
PNP	: Phnom Penh
PPSFP	: Phnom Penh Security Firm Plc.
PPWSA	: Phnom Penh Water Supply Authorities
RGC	: Royal Government of Cambodia
RGC	: Royal Government of Cambodia
SPSS	: Statistical Package for the Social Sciences
SPSS	: Statistical Package for the Social Sciences
TV	: Television
UC	: University of Cambodia
UNDP	: United Nations Development Program
UNIDO	: United Nation Industrial Development Organization
UNWTO	: United Nations World Tourism Organization
US	: United States
USA	: United States of America
USD	: United State Dollar
VIF	: Variance Inflation Factor
WSA	: Water Supply Authorities
WTTC	: The World Travel and Tourism Council



## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1. Introduction of the Chapter**

Global hotel occupancy increased by 4.7% in 2010, 7.4% in 2011, and 1.8% in 2014. It was forecast to increase by 2.6% in 2015, 2.5% in 2016, 2.5% in 2017, and 3.7% in 2018. However, it was reported that global hotel occupancy decreased by 1.5% in 2012, and global hotel occupancy stabilized in 2013. It was confirmed that global hotel rates have increased since 2010, except in 2012 and 2013, and they are predicted to increase by 3.7 percent in 2018 (Statista, 2019).

According to Muazu et al. (2017), the hotel industry has grown and has become a leading industry in the world, improving the economic condition of many countries (Esu, 2015). Moreover, the hotel industry, including the tourism and hospitality industry, accounted for 40% of the services trade (United Nations World Tourism Organization [UNWTO], 2015). The researchers also estimated that the end products of the hotels' on to the environment would increase global gas emissions by 21% (Scot et al., 2008). Energy and water are the main natural resources commonly consumed by hotels (Goosling et al., 2015). Statista (2019) revealed that the global hotel industry's worth increased from 466.57 billion US dollars in 2014 to 600.49 billion U.S. dollars in 2018.

Aside from improving national economic conditions, Hieu and Rasovská (2017) claimed that tourism has caused environmental degradation and social unrest (UNWTO, 2012). Similarly, Mbasera (2015) also stated that the negative effects of the hospitality industry on the environment have been discussed at the global level (Moutinho, 2000) due to the increase in energy demand, waste, water pollution, soil, and air (Kasim, 2006).

Hieu and Rasovská (2017) have recommended that tourist services, product qualities, and environmental qualities need to be improved to gain market competitive advantages and increase sales, prices, revenues, and profits, etc., through the combination of environmental objectives, practice, current attitudes, management strategies, and methods (Tanja, 2000). The researchers also added that environmental quality has been



prioritized in tourism destinations (Stabler & Goodall, 1997) and tourism industries such as hotels, lodging, restaurants, tour operators, catering services, transportation, parks, and other additional fields that guarantee the efficiency of tourism services and sustainable tourism development. A Green Globe in the world is an approach to conserving the environment and the Code for Sustainable Tourism was adopted in 2001 to promote tourism that was responsible for natural environments, social needs, and cultural sensitivities.

Mbasera (2015) acknowledged that accommodation has been regarded as a part of the hospitality sector (Ottenbacher et al., 2009) that has provided employment (Shuka & Ansari, 2013).

Besides employment absorption for people, accommodations have negative impacts on global resources (Kirk, 1995) through their consumption of energy and water and the discharge of large quantities of waste (Bohadanowicz et al., 2011). Hotels have polluted water (Nhapi & Gijzen, 2004; Kasim, 2006). Hotels need an increase in energy because some materials, including heating, ventilating, air conditioning, and laundry, have been equipped to comfort guests (Verginis & Wood, 1999). The researchers also recommended that renewable energy should be introduced in hotels and waste should be reduced (Kasim, 2006; Allen, 2007).

For regional levels, Statista (2019) identified the different hotel occupancy rates based on regions (Asia Pacific, America, Europe, and Middle East/Africa) from 2014 to 2018. Occupancy rates of hotels in two regions of Europe and the Americas have increased from 2008 to 2016, except in 2009. In the European region, the hotel occupancy rate was 65.1% in 2008, 60.5% in 2009, and it grew from 2010 to 2016. It was noticed that the highest occupancy rate in Europe was 70% in 2016. Similar to the European region, the hotel occupancy rate in the Americas region was 60.6% in 2008 and declined to 54.7% in 2009. The hotel occupancy rate went up again from 2010 to 2016. The highest hotel occupancy rate was 65.1% in 2016.

Statista (2019) indicated the sharp decline in hotel occupancy rates from 2008 to 2009 in the Middle-east Africa region was from 69.6% to 61.3% and from 2015 to 2016 from 63.2% to 61.6%. But in the region, a slight increase in occupancy rates from 2010 to 2014 was reported, from 61.3% to 63.4%. In the Asia-Pacific region, the hotel



occupancy rate from 2008 to 2009 declined sharply from 65.1% to 60.6%, and this went up from 2010 to 2014 from 66.7% to 68.2%, and this occupancy rate declined from 2015 to 2016 from 68% to 69%. In 2016, the European region had the highest rate of occupancy (70.4 percent), while the Asia-Pacific region had the lowest rate of occupancy (69 percent). The hotels in the Middle East region of Africa were expensive, with an average daily rate of 149.02 US dollars, while the hotels in the Asia-Pacific region were the cheapest for the last two years (Statista, 2019).

## **1.2. Background of the Study**

An increase in the number of international visitors from 2014 to Cambodia was identified. It was reported that 4,502,775 international visitors came to Cambodia in 2014, while 6,201,077 international visitors visited Cambodia in 2018. It was determined that 32.6 percent of the visitors, or 2.03 million people, were Chinese. The visitors to Cambodia from other countries included Vietnam (12.9 percent), Lao PDR (6.9 percent), and Thailand (6.2 percent). From January to September 2019, 4.8 million international tourist arrivals were reported, representing a 10% increase over the same period in 2018 (Cano, 2020). According to the Cambodia Constructors Association (2018), the number of national and international tourists will increase to around 28 million by 2030, with 15 million international tourists and 13 million local tourists expected to arrive by 2030, and seven million international tourists expected in 2020. In 2020, there were only 2.13 million passengers, including international, national, and transit, through three international airports in Cambodia. Of those, only 1.31 million were foreign visitors. In comparison with 2019, the number of visitors decreased (6.6 million in 2019), generating 4.91 billion USD. It was reported by the Ministry of Tourism that 90% of the foreign visitors to Cambodia dropped in the first quarter of 2021. There were 700,000 foreign tourists to Cambodia in the first quarter of 2021 (Business2Business, 2021).

The growth trend of international visitors has led to an increase in economic benefits for Cambodia. It was reported that the growth of international visitors in Cambodia provided 2,736 USD million in 2014, 3,012 USD million in 2015, 3,212 USD million in 2016, 3,638 USD million in 2017, and 4,375 USD million in 2018 (Ministry of Tourism, 2019). It was projected that the revenues from international tourist arrivals



would increase by up to 10 billion dollars and would create two million jobs (Xinhuanet, 2019).

There was confirmation of an increase in hotel occupancy rates from 2013 to 2019, except in 2014 and 2016. It was reported that the hotel occupancy rate was 69.5 percent in 2013, 70.2 percent in 2015, 71.3 percent in 2017, and 72.2 percent in 2018, but the hotel occupancy rates dropped in 2014 (only 67.5 percent) and 2016 (68.9 percent) (MoT, 2019).

The hotel industry in Cambodia grew from 1993 to 2016. The hotel and restaurant industry grew eight to 12 percent (CBRE Cambodia, 2012) and the hotels and restaurant industries shared the real GDP growth from 1.5 percent in 1993 to 4.9 percent in 2011 (CBRE Cambodia, 2012). From 2004 to 2013, there was an increase of up to 2,007 hotels and guesthouses with 31,223 bedrooms, which ranged from small family-owned enterprises to five-star internationally branded properties (Asian Development Bank [ADB], 2017).

Owing to an increase in visitors, the number of hotels in Cambodia from 2010 until June 2013 increased from 473 to 573, an increase of 30% (PPSFP, 2013). By the third quarter of 2015, 317 hotels with 15,000 rooms existed in Phnom Penh and 417 hotels with 17,000 rooms in Siem Reap province; 133 hotels with 4,000 rooms in Preah Sihanouk and 45 hotels with 1,600 rooms existed in Battambang (Meng, 2013). Ministry of Tourism [MoT] data suggested that there were 576 hotels in Cambodia in 2017. In 2021, 15,738 hotels, guesthouses, and restaurants in Cambodia offered accommodation to guests. Of those, 1,028 hotels with 44,428 rooms still provided the accommodation in 2020 and absorbed the employment of 35,561 staff (Business2Business, 2021).

The hotels and restaurants have strong linkages with the country's tourism sector as Cambodia has a very high tourist-to-population ratio (the number of tourists in a year to the total population of the country). In 2015, the increase in tourist arrivals was 6.1 percent, in comparison with seven percent in the previous year. Some 4.8 million tourists came to Cambodia in 2013. The number of tourists arriving by plane who wanted to stay longer and spend more money fell from 12.7 percent in 2014 to 8.9 percent in 2015 (Ministry of Economy and Finance [MEF], 2016).



The hotel, travel, and tourism industries have improved Cambodia's economic condition. In 2016, hotels, including travel and tourism, contributed 12.2 percent of Cambodia's GDP, or KH 9,888.6 billion (The World Travel and Tourism Council [WTTC], 2017). In 2019, travel and tourism contributed to Cambodia's GDP share of 32.7% (Knoema, 2019). The industry was expected to grow by 6.5 percent by 2027, reaching KH 20,491.7 billion (11.7% of GDP) (World Travel and Tourism Council [WTTC], 2017).

Moreover, the hotel, travel, and tourism industries in Cambodia have created jobs for people. The hotel, travel, and tourism industries generated 988,000 direct jobs (11.4% of total employment) in 2016 and the employment absorbed by the hotel, travel, and tourism industries was forecast to rise by 9.1% in 2017. In 2027, the hotel industry would generate 1,720,000 direct jobs (16.8% of total employment) with an increase of 4.8% (WTTC, 2017; Rezaei, 2019).

### **1.3. Statement of Problems**

Due to the negative impact of hotel operations on the environment and natural resources, topics about green practices in hotels or environmental practices in hotels have been studied in other countries like Nigeria, Zimbabwe, and South Africa, as well as Malaysia, Vietnam, Thailand, and Kenya. Those studies were elaborated upon.

In Nigeria, a rapid increase in the hotel industry has led to concerns about the environment, excessive use of water, disposal of waste issues, noise issues, and energy issues. Therefore, a survey on predictors of the likelihood of adoption of green practices in hotels was conducted by Muazu et al. in 2017. Their findings were that there was a positive correlation between perceived innovation characteristics and green adoption likelihood (relative advantage, compatibility, and complexity of green practices), organizational characteristics, green adoption likelihood, perceived environmental characteristics, and green adoption likelihood, and stakeholders' influence and green adoption likelihood.

Another study was conducted in eight hotels in Zimbabwe and South Africa to identify the barriers to green management initiative implementation in hotels. The study was conducted because there was low awareness among local customers of environmental problems emanating from hotel operations and a lack of resources for the



implementation of green management initiatives. But some hoteliers have not intended to adopt sustainable environmental management practices. Researchers have identified barriers to green implementation in hotels, such as lack of knowledge of green management, no green management policy in hotels, and old buildings that are incompatible with the new needs of green tourists (Mbasera et al., 2017).

In Vietnam, with a fast-growing destination island such as Phu Quoc in Kien Giang Province, unplanned destination development is ineffective and the environment has been polluted. Green practices not only cared for the environment on Phu Quoc Island but also developed competitiveness and became sustainable (Hieu & Raovská, 2017). A case study of Phu Quoc Island, Vietnam, was conducted to develop a conceptual model of green practices impacting tourism businesses and their performance. Their study found that green practice has been positively directed and impacted by behaviour intention, while behaviour intention is directly and positively impacted by expectancy. Demographic variables have direct and positive impacts on innovation characteristics, performance expectancy, social influence, facilitating conditions, and effort expectancy. Facilitating conditions, social influence, performance expectancy, and innovation characteristics impact directly and positively on behaviour intention. Funding availability has a direct and positive impact on social influence. Green practices impact directly and positively on the environment and business performance.

Due to the negative impacts on the environment, the tourism industry has put tremendous effort into the greening of its industry. For some reason, the slow growth of the greening lodging industry in Malaysia was identified. The study was done to determine the barriers to green hotels and resorts in Malaysia. The researchers of this research indicated that all hotel managers disagreed with the high cost of hotels' becoming green, while resort managers agreed with the high cost of green implementation in resorts because there was financial support from parent companies. All managers agreed that there was no problem with getting information regarding green practices as it could be accessed through the internet. The green operation could be supported by top management or by owners of hotels and resorts. All managers agreed that there was a lack of green experts and resources such as manpower and green equipment. All managers agreed that they knew the outcome of green practices like energy, waste, and water-saving, which lead to financial benefits. The government has not supported hotel C and resort A, while there was support from the government for



hotels A, B, and resort B. According to their research, the government was very supportive of its green programs and practices. There was no support from local authorities for Hotel C and Resort A. All managers agreed that there was no high maintenance cost for green operations. Difficulties in balancing the quality of service with environmental performance were identified by all managers. The difficulties in balancing between guests' needs and green practices were identified by managers.

According to Marian (1998), the hospitality sector consumed many more resources in comparison to other tourism sectors. To satisfy guests, hotels have used large amounts of resources. However, changes in the environmental movement have been observed gradually, as have the environmental practices of many hotels around the world. Therefore, a study on environmental practices in the hotel industry was conducted in Phuket, Thailand to determine the extent of existing environmentally friendly practices and the motivations driving operators to engage. Adopting environmentally friendly practices in hotels benefits the environment by protecting it, running buildings efficiently with lower operating costs for hotel owners, increasing guest satisfaction, and indirectly benefiting the environment by reducing energy consumption. However, in comparison to other cities, Phuket hotels have produced fewer results in terms of sustainable development. These include: a lack of support for environmental improvement at all levels of government; the business community; non-governmental organizations (NGOs) and local communities, a lack of resources (human and financial); a lack of expertise within the Phuket hotel industry, and a lack of awareness among most residents about the importance of environmental quality and the principle of scalability. Fadhil (2015) conducted a study on the adoption of green practices in the hospitality and tourism industries in Lamu County, Kenya to determine the extent of the adoption of green practices in the hospitality and tourism industries and identify factors influencing the adoption of green practices in the hospitality and tourism industries.

Two studies have been conducted in Cambodia concerning the negative impacts of hotels on the environment and natural resources. The first research conducted by the Mekong River Commission (2010) revealed that the water and aquatic resources of the middle and lower sections of the Siem Reap River have been polluted by hotels, and the contaminated water has flown into the Tonle Sap Lake, which could disrupt aquatic species. Additionally, water pumping wells have been drilled due to the rapidly increasing numbers of hotels that reduce water tables (Watson, 2008; MRC, 2010).



Moreover, the hotels have increased pressure on water supply and drainage, especially as tourists tend to use more water than residents. Hotels, guesthouses, and restaurants have discharged wastewater directly into rivers, including the Mekong River.

The second study, conducted by the United Nations Industrial Development Organization [UNIDO] and the Fishery Administration [FiA], (2015), revealed that hotels and restaurants on offshore islands polluted Cambodia's coastal environment by dumping sewage and wastewater into open areas, including the ocean, without any water treatment. Rizvi and Singer (2011) as cited in UNIDO and FiA (2015) highlighted deteriorating water quality (of household, municipal, and tourism activities, including hotels and resorts) as a major reason which has caused a threat to the marine fisheries' ecosystem.

Regarding harming the environment and natural resources, some studies have been conducted. A survey on predictors of the likelihood of adoption of green practices in hotels was conducted (Muazu et al., 2017), focusing on the correlation between perceived innovation characteristics, organizational characteristics, perceived environmental characteristics, and stakeholders' influence on green adoption likelihood. Another study was conducted in Zimbabwe and South Africa to identify the barriers to green management initiative implementation in hotels (Mbasera et al., 2017). A conceptual model of green practices impacts tourism businesses and their performances (Hieu & Rašovská, 2017). The study was done to determine the barriers to green hotels and resorts in Malaysia (Marian, 1998). Cambodia has faced similar environmental and natural resource harm caused by hotels, but the effectiveness and efficiency of exploring the benefits of green business-standard implementation in hotels and the motives and barriers to green business-standard implementation in hotels have not been studied.

Even though negative impacts of hotels' operations on the environment and natural resources in Cambodia have been noticed and studied, the degree of green business-standard implementation has not been studied to find out the strength and weaknesses of hotel green operations.

To analyze the application of the green business standard in hotels in Battambang, Siem Reap, Phnom Penh, Koh Kong, Preah Sihanouk, Kampot, and Kratie provinces and



related environmental impacts, the research "GREEN BUSINESS STANDARD: Case Study of the Implementation in Hotels in Cambodia" was conducted.

#### **1.4. Objectives of the Study**

The research objectives are identified as the following

1. To assess the extent of green business-standard implementation in hotels in target provinces.
2. To determine the efficiency and effectiveness of green business-standard implementation in hotels in target provinces.
3. To identify the influencing factors on green business standard implementation in hotels.

#### **1.5. Research Questions**

1. To what extent are green business standards implemented in hotels in target provinces?
2. How does green business-standard implementation in hotels increase resource efficiency?
3. How do influencing factors drive green business standard implementation in hotels?

#### **1.6. Research Hypothesis**

To address the research objective 2, five research hypothesizes were proposed below

**Hypothesis 1:** There is no significant prediction of "water reduction" by GBSI in hotels.

**Hypothesis 2:** There is no significant prediction of "energy reduction" by GBSI in hotels.

**Hypothesis 3:** There is no significant prediction of "cost reduction" by GBSI in hotels.

**Hypothesis 4:** There is no significant prediction of "guest increase" by GBSI in hotels.

**Hypothesis 5:** There is no significant prediction of "profit increase" by GBSI in hotels.

To address research objective 3, five hypothesis were proposed below



**Hypothesis 6:** There is no relationship between IF1 “Customers’ Support” GBSI in hotels.

**Hypothesis 7:** There is no relationship between IF2 “Government Regulations” and GBSI in hotels.

**Hypothesis 8:** There is no relationship between IF3 “Perceived Benefits” and GBSI in hotels.

**Hypothesis 9:** There is no relationship between IF4 “Managers’ Attitude” and GBSI in hotels.

**Hypothesis 10:** There is no relationship between IF5 “Staff’s Supports” and GBSI in hotels.

### **1.7. Theoretical Framework**

Some theories were used in this study to better understand green business standards, their effectiveness and efficiency, and the factors that influence green business-standard implementation in hotels. First, to conceptualize the green business standard to address research objective 1 in this research, Green Theory, Environmentally Sustainable Hotel Management, and Corporate Social Responsibility.

Since the early 1990s, when the term "green" referred to environmental concerns, this theory has emerged (Eckersley, 2007). The internal practice of green to achieve the goal of the green facility (Kim, 2005). Water and non-durable goods were widely used by hotels that polluted the environment (Yue et al., 2014). The term "green" refers to being responsible for the environment, sustainability, eco-friendly consideration, and the environment (Pizam, 2009). Hotel "green practice" refers to saving energy, water, and waste reduction (Manaktola & Jauhari, 2007; Green Hotels Association, 2014). Moreover, green practice focuses on product strategies of organic or recycled products and system change. This green practice in hotels aims to reduce the negative impacts of their activities on natural and social environments, which is a part of hotel sustainability (Claver-Cortés et al., 2007; Kim & Han, 2010; Han et al., 2010; Sloan et al., 2013; Jones et al., 2014).

Mensah (2007) viewed the color green from a variety of perspectives, including cultural, economic, and political ones. From an economic perspective, the business was operated with care of the environment that met the needs or expectations of the stakeholders (Gupta, 2012). This approach also focused on the reduction of



environmental impacts from business through techniques, policies, and hotel operations. The reduction of environmental impacts through hotel operation included water-saving, energy-saving, and a decrease in waste (Montaboun, et al., 2006).

This "green theory" has been discussed at global, regional, and national levels. At the regional level, ASEAN has developed Green Standard Hotels to increase environmental and energy conservation among member countries. Green products, human resources, and environmental management were also included in green standards (ASEAN, 2016).

In Cambodia, green hotels have started since 2009. The green hotel indicators consist of policy, green products, communication, human development, waste management, energy-saving, water-saving, air quality, noise management, liquid management, and chemical management (Eckersley, 2007).

Environmental sustainable hotel management refers to the implementation of the management of a sustainable hotel that relates to sustainability, environmental impact, resource and waste management, control, emissions, and pollution (Kirk, 1996; Ustad, 2010). The different types of impacts from hotel operations were: geographic sites (Kirk, 1996); luxury and comfort in hotels that required more water, power, and other resources, and waste disposal due to the equipment used in hotels (Ustad, 2010).

Another approach was Corporate Social Responsibility (CSR), which was employed as well. The term "CSR" was unrestrictedly used in the 1970s. In 1979, Carroll defined the term "CSR" as the "social responsibility of business that consists of legal, ethical, economic, and discretionary expectations that society has of organizations at a given point in time" (Carroll, 1979). In 1980, Thomas M. Jones (1980) considered CSR as a decision-making process that influenced corporate behaviour. Jones' (1980) contributed to CSR that concentrated on operationalization rather than concept.

In 1991, Carroll (1991) identified the "Pyramid of Corporate Social Responsibility" as the four main responsibilities of the company, including economic responsibilities, legal responsibilities of the firm, ethical responsibilities, and the philanthropic responsibilities of the corporation.

In 1996, Burke and Logsdon (1996) acknowledged five dimensions of strategic CSR. These included visibility, proactivity, centrality, specificity, and voluntarism. Centrality



refers to how to fit CSR into the mission and goals of companies. Specificity is the ability to gain specific benefits. Proactivity refers to the ability to create policies in anticipation of social trends. Voluntarism is acknowledged as a discretionary decision-making process that is not affected by external compliance. Lastly, visibility is relevant in recognizing CSR for internal and external stakeholders (Burke & Logsdon, 1996).

This approach concentrated on the social and environmental issues of business operations (Nijhof & Jeurissen, 2010; Mbasera, 2015). Some of the benefits of hotels or companies should be shared with communities. This theory also focused on negative impact reduction (Griffin & Prakash, 2010; Mbasera, 2015).

To understand and conceptualize research objective 2, efficiency and effectiveness of green business-standard practice in hotels, the efficiency and effectiveness theories were employed in this research. The Efficiency and Effectiveness Theories were used to assess the organization's performance (Mouzas, 2006). The organizational effectiveness confirmed by Meyer and Herscovitch (2001) was assessed in different ways. This included relations between managers, staff, and employees; the decision-making process; and psychological attachment.

Effectiveness refers to output, sales, quality, the creation of additional value, innovation, and cost reduction. Effectiveness was employed to assess the degree to which a business's goal was achieved or the interaction of outputs with the economic and social environment (Mouzas, 2006). According to Zheng (2010), effectiveness refers to the degree of policy objectives or organizational objectives achieved. The effectiveness developed by Heilman and Kennedy-Phillips (2011) was that progress on mission fulfilment and goal achievement was assessed.

According to Low (2000), efficiency was employed to assess the relationship between inputs and outputs. Pinprayong and Siengthai (2012) identified that business efficiency was used to assess the ratio of the performance of input and output. Organizational efficiency refers to internal process improvement (Bartueviien & akalyt, 2013).

To identify the influencing factors mentioned in research objective 3: "influencing factors for green business-standard implementation in hotels," The theories employed in this research included stakeholder theory, institutional theory, innovation theory, resource-based theory, and the theory of planned behavior.



**Stakeholder Theory:** Stakeholder theory identifies the group or individual that has affected or been affected by the organization (Friedman, 2006), including regulatory, market, and social actors (Delmas & Toffel, 2004; Mbasera, 2015). Environmental policies and frameworks are required to be implemented in business (Darnall et al., 2008). Suppliers and customers increased their awareness of the environment and pressured the industries to practice the environment in their industries (Han et al., 2010). Social and individual characteristics could influence innovation adoption (Valente, 1996).

**Institutional Theory:** This theory was complex. It refers to the organization's being influenced by normative pressures from external sources or within the organization (Zucker, 1987). The institutional theory acknowledges that the driving forces affecting firm behavior are socially based on institutions and interconnected organizational networks (Iacobucci & Hopkins, 1992). The theory of institutions covers three areas: the influence of government (Rivera, 2004; Fadhil, 2015), the causes of enterprises' imitation (Ball & Craig, 2010; Fadhil, 2015), and enterprises' imitation of successful competitors (Aerts et al., 2006; Fadhil, 2015).

**Innovation Theory:** Innovation Theory aims to identify social systems, including external and internal factors that influence hotel green adoption. Hieu and Rasovská (2017) revealed that individual characteristics and social systems have motivated and influenced the adoption of innovative initiatives in hotels (Valente, 1996). According to Rogers (2003), the Innovation Theory covers compatibility, complexity, relative advantage, triability, and observability. One of those determinants was a relative advantage, which focused on perceived benefits and social benefits (Rogers, 2003). The adoption of innovation gains greater economic benefits through cost reduction, increases social benefits, and reputation enhancement (Kasim, 2007; Nicholls & Kang, 2012).

According to Barney (1991), the resource-based theory (RBT) is an important approach in strategic management. Resource-Based Theory was explained by Hart (1995). This approach refers to the internal factors that have encouraged the activities of an organization. This approach included competitive advantages and financial considerations. The resources include human, physical, and intangible resources (Graci & Dodds, 2008; Mbasera, 2015). In an environmental management system, some



actions should be carried out, including training, motivation, evaluation of performance, and a reward-based environmental strategy (Bohdanowicz et al., 2011; Mbasera, 2015).

The Theory of Planned Behavior explains the Intention of Customers to Visit Green Hotels (Hsu & Sheu, 2009; Mbasera, 2015). Customer loyalty was also a goal for firms, especially in competitive environments. Loyalty includes a multidimensional paradigm with behavioral and attitudinal components. The behavioral perspective referred to the experience, while the attitudinal perspective was based on future actions. Oliver (1997) defined loyalty as the commitment to repeat purchases of a product or service in the future.

There was a relationship between loyalty and satisfaction. Satisfaction was a factor in consumer loyalty (Rauyruen and Miller, 2007). Lam et al. (2004) proved that customers who were satisfied with a service were motivated to purchase it again. Satisfied consumers would recommend the service to others.

There was a relationship between the two variables. Some authors proved that the intention to stay in a hotel was not positively influenced by satisfaction (Han et al., 2009; Han et al., 2011; Chen, 2015). Bajs (2015) has confirmed that satisfaction didn't affect tourists' future purchase intentions.

It was proved by many studies that confirmed the effect of "green" practices on tourists' intentions to revisit and drew a variety of conclusions. Environmental practices such as low-energy light bulbs, soap and shampoo dispensers, and recycling policies all had a direct and positive impact on hotel revisits and WOM intention (Chen, 2015). Tourist satisfaction was positively impacted by green initiatives, which included purchasing local and organic products (Berezan et al., 2013).

Consumers influenced tourism businesses to improve their environmental management practices (Rodrguez et al., 2007). Customers have also paid attention to environmental issues because of the global environmental crisis and increased awareness of climate change (Follows & Jobber, 2000). Some studies have revealed that the demand for environmentally compatible products and services from consumers has continued to grow (Clark, 2009; Environmental Leader, 2009; The Star, 2010). The green products were preferred by customers (Henriques & Sadorsky, 1996; Khanna & Anton, 2002). Han et al. (2009) also found evidence that customers who preferred green hotels were



willing to pay more for green hotel products. On the contrary, Buysse and Verbeke (2003) found that there was no link between customer pressure and environmental proactiveness.

### **1.8. Research Framework**

The theoretical review conceptualized this research. The three theories, including Green Theory, Environmentally Sustainable Hotel Management, and Corporate Social Responsibility, have popularized the green business standard, which deals with research objective 1.

In research objective 1, the green business-standard was conceptualized with four main parts: (a) human resources and internal practices; (b) environmental promotion, including energy-saving, water-saving, waste management, air quality, and chemical substance management; and (c) promoting green product usage and local economic development, which consists of three main areas, like promoting green product usage, promoting local employment, and economic development; and (d) increasing environmental awareness for local communities and local cultural and traditional promotion.

In objective 2 of the research, the efficiency and effectiveness of green business-standard practices in hotels, this research refers to saving resources, reducing costs, and increasing client and profit. In this research, the relationship between the degree of GBSI in hotels (independent variables) and EE1: water reduction, EE2: energy reduction, EE3: cost reduction, EE4: guest increase, and EE5: profit increase was examined.

To identify the influencing factors that predict the degree of GBS implementation in hotels that are mentioned in research objective 3, five theories were reviewed and discussed. These included Stakeholder Theory, Innovation Theory, Institutional Theory, Resource-Based Theory, and Plan Behavior Theory to identify customers' support, government regulation, economic benefits or social benefits, hotel manager/owner behaviors, and staff support.

The first, the customers' support factor on green business-standard implementation, was identified through the discussion on Stakeholder Theory and Plan Behavior Theory. The



Plan Behavior Theory has helped identify the intention of customers to visit green hotels and extra payment for green practices in hotels.

Second, the economic benefits and social benefit factors of green business-standard implementation in hotels were identified through the review of innovation theory. Through Stakeholder Theory and Institutional Theory reviews, the third factor, government influence and regulation, was an influencing factor on the adoption of green business standards in hotels (Rivera, 2004; Fadhil, 2015).

The fourth, hotel manager/owners' behavior, was a factor of green business-standard implementation through capacities/knowledge and valuation of the green business through Resource-Based Theory and Planned Behavior (Graci & Dodds, 2008; Mbasera, 2015). The fifth staff support factor on green business-standard implementation through capacities/knowledge and valuation of the green business was identified through Resource-Based Theory and Planned Behavior (Graci & Dodds, 2008; Mbasera, 2015).

In research objective 3, the influencing factors for green business-standard practices in hotels were prioritized, including IF1: Customer Support, IF2: Government Regulation/Framework, IF3: Perceived Benefits, IF4: Hotel Owners/Managers' Attitude, and IF5: Staff Support. To address research objective 3, the average score of influencing factors (independent variables) was computed. Then the relationship between the influencing factors (IFs) (independent variables) and GBSI in hotels (dependent variables) is summarized in Figure 1.1.

Figure 1. 1: Research framework





### **1.9. Significance of Study**

The importance of the research was identified as the following: First, the research findings are imperative to various stakeholders, like provincial departments of tourism, the Ministry of Environment, and local communities. The tourism departments would use the research findings to develop action plans for increasing the green practices of hotels in target provinces.

The research findings would be used to improve the capacities of government officials so that they can perform their duties and roles more effectively, in particular, to deliver their services of greening hotels. Second, the research findings are vital for policy-makers to develop policies that contribute to promoting the green practices of hotels in Cambodia and set up incentive systems to promote green practices in hotels in Cambodia.

Third, this research is used by hotel owners and shareholders to improve strategies to promote hotels' services to customers and improve hotels' capacities through mainstreaming this green approach to staff through training, capacity building, etc. Another significance is that the research findings are used to improve students' and academics' understanding of green business standards and the implications of hotel green concepts. Last, it is vital to promote green businesses that contribute to the reduction of negative impacts on the environment.

The research is aligned with the Sustainable Development Goals, Green Finance, and COP-26. First, the research will contribute to achieving the SDG. The SDG consists of 17 goals. Of these 17 goals of the SDG, research will contribute to the achievement and alignment of goals 12, 13, 14, and 15. The research focused on the green business in hotels that would contribute to climate action, as mentioned in goal 13 of the SDG, through environmental protection measures such as water-saving, energy-saving, waste management, organic food, and environmental protection (United Nations, 2021b).

A component of green practice in this waste management research will contribute to the achievement of SDG 12 on the global material footprint. It was reported that one million plastic drinking bottles were used every minute, while five trillion single-use plastic bags were thrown away (United Nations, 2021a).



One component of green business in the hotel sector was promoting environmental protection activities and local cultural promotion. The research will also contribute to achieving goal 14 of the SDG, focusing on the sustainable development of marine and ocean resources. Over three billion people worldwide rely on the ocean for a living, while dead zones have increased from 400 in 2008 to 700 in 2019 (United Nations, 2021c). The research will also contribute to achieving Goal 15 of the SDG, which is focused on forest, land, and biodiversity protection (United Nations, 2021).

The research will contribute to COP-26 when all parties will be united to take actions to achieve the goal of the Paris Agreement and the UN Framework Convention on Climate Change (UN Climate Change Conference UK 2021), which aims to limit global temperature rise to 1.5 degrees Celsius with the four focuses of migration, collaboration, finance, and collaboration (United Nations, 2021).

The research is also important for green finance. Green finance aims to increase finance from banking, micro-credit, insurance, and investment from the public, private, and not-for-profit sectors for sustainable development priorities (United Nations Environment Program [UNEP], 2021). It is also important for RGC to develop policies and regulations to promote investment, green technologies, and financing for sustainable natural resource-based green economies and a climate-smart blue economy (UNEP, 2021).

#### **1.10. Limitations of the Study**

Only 132 hotels in six provinces and one municipality have been selected for interviews. Of those hotels in the six provinces and one municipality, six were in Battambang, 60 in Phnom Penh, 43 in Siem Reap, 12 in Preah Sihanouk, two hotels in Kampot, three hotels in Koh Kong, and two hotels in Kratie province. In total, 119 people who had stayed in hotels were interviewed to learn about their green knowledge and their willingness to stay and pay for green practices.

The respondents who have been selected for interviews were only the managers, owners, or supervisors of the hotels who were aware of the green information in the hotels. Therefore, not all of the staff members in each of the hotels were selected to be interviewed, and the information was based on the opinions of representatives, managers, owners, or supervisors. Hotel guests were not targeted for interviews. The



information about guests with the implementation of green business standards in hotels was based on the hotels' managers, supervisors, and owners. The green business-standard implementation in hotels was related to guests or local communities, but the information on local economic development and employment was based on the information provided by hotel managers, owners, supervisors, and officials or directors of departments of tourism in target provinces.

After a review of theories, many factors have affected green business-standard implementation in hotels. But in this study, we focused on customers' support, government policies' and regulations' support, perceived benefits, and management attitude. Some factors for green business adoption in hotels were not included in this research, including community movement and immigration from successful competitors.

In terms of the effectiveness and efficiency of GBSI in hotels, the study focused on the relationship between the average scores of GBSI and the inputs of hotel operations and outputs of hotel operations. The score of the inputs included the scores of cost reduction, energy reduction, and water reduction, while the outputs of hotel operations included the scores of guest increase and profit increase.

### **1.11. Operational Definitions**

The Green Business Standard focuses on human resources and internal green practices, environmental protection (effective water, effective energy, waste, and air quality management), promoting green products and local economic development, environmental promotion, and local cultural promotion.

Efficiency and Effectiveness: efficiency refers to water reduction, energy reduction, and cost reduction for green business-standard implementation in hotels. Effectiveness encompasses the increased number of guests and profits as a result of green business practices in hotels. The effectiveness was employed to assess the relationship between the scores of GBSI in hotels and the scores of water, energy, cost reduction, guest increase, and profit increases.

Influencing factors of GBSI refer to independent factors including customers' support, government regulations, perceived benefits, hotel managers' attitudes, and staff support.



### **1.12. Summary of the Chapter**

This chapter summarizes chapter 1. First, the research introduction states that there is an increase in global hotels, the negative impacts of hotels on environmental degradation and society, and the importance of hotels for employment. The research background mentions an increase in the number of international visitors, economic benefits from international visitor increases, the linkages between hotels, restaurants, and economic benefits. The problem statement mentions the negative impact of hotel operations on the environment and natural resources and some studies in other countries. Two studies were conducted in Cambodia on the negative impacts of hotels on the environment and natural resources. Three research objectives and three research questions were proposed. Ten research hypotheses were formulated in this research. Ten theories were discussed and argued to conceptualize the research framework. The significance and limitations of the study were mentioned. The proposed terms like "green," "efficiency and effectiveness," and "influencing factors on GBSI" The final section is a synopsis of Chapter 1.



## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1. Introduction of the Chapter**

In this chapter, five main parts are outlined in Chapter Two. These include the chapter introduction, theoretical and empirical review of previous research, research gaps, and chapter summary.

#### **2.2. Theoretical Review on Green Practice in Hotels**

To frame the concept of green business standards in hotels, three theories were employed, like Green Concept, Corporate Social Responsibility, and Sustainable Hotel Management, while to assess the efficiency and effectiveness of green business-standard implementation, two concepts/theories were used: Efficiency Theory and Effectiveness Theory. To identify influencing factors, four theories were employed: Stakeholder Theory, Institutional Theory, Innovation Theory, Resource-Based Theory, and Plan Behaviour Theory.

##### **2.2.1. Theories and Concepts of Green Business Standard**

###### **2.2.1.1. Green Theory**

There has been the emergence of green theory since the early 1990s, and this green focused on environmental concerns (Eckersley, 2007). The term "green" was defined as environmentally friendly (Shrum & McCharty, 1995), with environmentally friendly management transforming natural resources into better output (Gupta & Sharma, 1996). Green practice refers to saving energy, reducing water, preventing pollution, re-using and recycling materials, using sustainable foods, and designing buildings and space (Hieu & Raovská, 2017).

Green practice in business perspective was defined as corporate environmental performance to meet stockholders' expectations (Gupta, 1995; Kim, 2005), environmental harm reduction from the business running like conserving energy, saving water, and decreasing solid waste (Manaktola & Jauhari, 2007; Mbasera, 2015), lessening environmental impacts from business operations by techniques, policies and



processes (Montabon et al., 2006; Hieu & Rašovská, 2017), responsibilities of business operation for environment (Krozer, 2008; Gössling et al., 2009; Hieu & Rašovská, 2017) and reduction, reuse, recycling, and recovery in business, reduction of resource consumption that minimize environmental footprint from business operation" (Kassaye, 2001; Čekanavičius & Bazytė, 2014).

Green hotel practices include energy efficiency, water conservation, recycling (waste reduction), and clean air (air quality control) (Bohdanowicz, 2005; Mbasera, 2015), business operations that minimize environmental degradation (Iwanowski & Rushmore, 1994), and environmentally friendly business disciplines such as energy efficiency, water conservation, and waste reduction (Alexander, 2002; Kim, 2005).

From an economic perspective, the corporation emphasized an environment that meets the needs or expectations of the stakeholders (Gupta, 2012). The reduction of environmental impacts from business was done through techniques, policies, and hotel operations that included water saving, energy saving, and a decrease in waste (Montaboun, et al., 2006).

#### **2.2.1.1. Environmentally Sustainable Hotel Management**

The hotel system and a large number of human interfaces defined environmental sustainable management implementation in hotels as "Environmentally Sustainable Hotel Management," which relates to sustainability, environmental impact, resource management, waste management, control, emission, and pollution (Kirk, 1996; Ustad, 2010).

Referring to Ustad (2010), the impacts of hotel operations on the environment have been identified in different ways (Revilla et al., 2001), and the location of many hotels in natural beauty and historic significance has a delicate eco-balance (Kirk, 1996). Guests were attracted by the luxury and comfort offered in hotels, and the luxuries and comforts in hotels consumed more water, power, and other resources (Ustad, 2010). The large quantities of energy resources were used for hotel industry operations such as air-conditioning, food service, laundering, and transportation. Moreover, Ustad (2010) stated that the growth and progress of the hotel industry relied on the accessibility of natural resources, and the guests' concerns were less about resource conservation when they were out of the home (Bohdanowicz, 2005).



Ustad (2010) also revealed that energy consumption: energy was daily required for hotel operation for 24 hours (Kasim, 2007; Deng, 2003) for freezing, kitchen, laundry, warming, lighting, hot water, ventilation, and miscellaneous uses and energy consumption patterns in hotels (Dascalaki & Balaras, 2004). Different forms of energy consumption by hotels release harmful gases into the atmosphere and pollute the air as fuels are used to generate energy, such as coal (12%), liquefied petroleum gas (LPG) (9%), petroleum fuel (3%), natural gas, and wood (1%) (Becken et al., 2001; Ustad, 2010; Bohndanowicz, 2005). Three types of energy used in hotels are electricity, gas, and diesel (Dang, 2003; Chan, 2005).

A high amount of water was consumed in hotels for services, types of facilities and hotel accommodation (Bohdanowicz, 2005; Ustad, 2010), spa, swimming pools (Kazim, 2007; Ustad, 2010), and cold water for drinking, kitchen, laundry, circulation for air conditioning, hot water for guest bathrooms, and circulation for space heating (Kirk, 1996; Ustad, 2010). In Spain, 880 liters of water were consumed per day by tourists in comparison with a local Spaniard who consumed an average of 250 liters per day (Kazim, 2007; Ustad, 2010). Water containment has affected water. Lack of monitoring of water consumption has caused a water shortage. The release of a larger quantity of contaminated water can pollute water bodies and harm the environment (Kirk, 1996; Kasim, 2007; Ustad, 2010). To minimize the environmental impact, the management of waste was vital and some points should be considered, including the efficiency of water usage and water contamination minimization, technology, knowledge, and sustainability programs. Moreover, the reduction of water usage in hotels from 1,500 liters to 378 liters on average in the first month of operation (Alexander, 2002; Ustad, 2010).

The solid waste generated by hotels was based on hotel size. The size of the hotels and the types of functions held at hotels make a difference (Kazim, 2007). The waste generated by hotels increases the cost of the industry. Waste management contributes to saving resources, energy, and money. Food production and service generate more waste than hotel operations (Kirk, 1996; Ustad, 2010).

#### **2.2.1.2. Corporate Social Responsibility**

Corporate Social Responsibility (CSR) was developed in the 1970s. This CSR theory was defined by Carroll in 1979 and includes legal, ethical, economic, and discretionary



expectations (Carroll, 1979). According to Jones (1980), this theory refers to the decision-making process that influences corporate behaviour.

Then, the Pyramid of CSR was identified by Carroll (1991) as focusing on economic responsibilities, legal responsibilities of the firm, ethical responsibilities, and the philanthropic responsibilities of the corporation (Carroll, 1991).

In 1996, CSR was identified by Burke and Logsdon (1996) as including centrality, specificity, proactivity, voluntarism, and visibility. "The centrality" refers to how to fit CSR into the mission and goals of companies. The specificity was the ability to gain specific benefits. Proactivity refers to the ability to create policies in anticipation of social trends. Voluntarism is a discretionary decision-making process, and this was not impacted by external compliance. Recognizable CSR for internal and external stakeholders was defined as visibility (Burke & Logsdon, 1996).

Corporate Social Responsibility (CSR) refers to companies that care about social and environmental concerns in their business operations and in their interaction with their stakeholders (Nijhof & Jeurissen, 2010; Mbasera, 2015). Those companies that complied with CSR knew that besides their profit, they should share some benefits with the community (Bohdanowicz & Zientara, 2008; Mbasera, 2015). Many companies have awakened to corporate social responsibility after public responses to issues they had not previously thought were part of their business responsibilities were ushered into the discourse. Firms applying CSR have adopted workers, consumers, society, and future generations (Bohdanowicz & Zientara, 2008; Mbasera, 2015). Corporate Social Responsibility seeks to reduce the production of negative environmental externalities associated with producing the organization's goods and services (Griffin & Prakash, 2010; Mbasera, 2015).

### **2.2.1.3. Regional Frameworks of Green Business**

ASEAN, of which Cambodia is a member, has boosted green standard implementation in hotels. Frameworks, policies, and standards of green growth, including tourism services, have been developed, such as the ASEAN Tourism Strategic Plan 2016–2022, the Roadmap for Integration of the Tourism Sector, the ASEAN Declaration, and the ASEAN Tourism Agreement. The ASEAN Declaration on Cruise Tourism by the ASEAN Tourism Minister considered the environmental and social issues in tourism



developments and the effectiveness of tourism destination management (ASEAN, 2018).

In the ASEAN Tourism Agreement, member states ensure the preservation, conservation, and promotion of natural, cultural, and historical heritage and promote technologies to preserve natural heritage, ecosystems, biodiversity, and natural resources (ASEAN, 2002).

The ASEAN Tourism Strategic Plan 2016–2025 has strong commitments to move economic growth that is focused on inclusiveness and green to greater ASEAN integration goals. Additionally, the vision of the tourism strategic plan 2016–2025 focuses on tackling natural, cultural heritage, and climate change issues. To achieve the vision, direction 2 is to ensure that ASEAN tourism is sustainable and inclusive. One of the strategic programs is to increase responsiveness to environmental protection and climate change. The committee groups have been assigned to implement action programs and activities. One of the four committees to be responsible for climate change and environmental protection is the "ASEAN Sustainable and Inclusive Tourism Development Committee." The committee's mandates are to ensure environmental protection, responsiveness to climate change, safety, security, protection, and management of heritage sites, as well as local community participation in the tourism value chain. As a milestone, ASEAN plans to develop guidelines for incorporating environmental and climate change mitigation, adaptation, and resilience (ASEAN, 2015).

The ASEAN tourism standard was created to serve as a guide for certifying tourism services in six categories: green hotels, food and beverage services, public restrooms, homestays, ecotourism, and tourism heritage. The criteria which were identified in the ASEAN green hotel standard include environmental policy, green products, collaboration with the community, life of a community, human resource development, solid waste management, energy efficiency, water efficiency, air quality management, noise pollution control, wastewater treatment and management (ASEAN, 2007).



#### **2.2.1.4. National Framework of Green Business**

To promote green in economic and business development, frameworks and policies have been developed and localized at the national level, such as green growth, green growth roadmap, green growth policy, and green growth strategy.

The Cambodia Green Growth Roadmap (GGR) was created to serve as a guide for promoting green development in Cambodia, with a focus on access to water resource management and sanitation, food security and non-chemical products, sustainable land use, renewable energy, and energy efficiency. Of those focuses, some thematic areas are referred to as the focus of renewing energy, energy efficiency, and access to food security and non-chemical products that have been promoted in green hotel practices in Cambodia as well (Danh, 2013).

The National Policy on Green Growth also highlighted the balance of economic development with the environment, sustainable natural use, livelihood improvement, and ecological safety (Danh, 2013).

In 2013, the Royal Government of Cambodia adopted the National Strategic Plan on Green Growth 2013–2030, which prioritized green investment, green job creation, the balance of green economy management and the environment, blue economy development, the green environment, green education, green technology, and good governance on green growth (Danh, 2013).

Specific guidance for implementing the green business standards in hotels and a national standard of green hotel assessment has been produced that mainly prioritizes seven parts: (1) environmental protection and environmental knowledge activities and implementation; (2) green product usages that encourage and motivate the use of environmentally friendly domestic products, as well as collaboration with the local community and local non-governmental organizations; and (3) human resource development, which refers to understanding and being aware of global environmental problems, as well as developing and educating human resources about resource management. (4) solid waste management, (5) effective use of resources, (6) environmental atmosphere and air-quality management, (6) liquid waste management, (7) liquid waste management, and (8) chemical substance management (MoT, n.d.).



### **2.2.2. Efficiency and Effectiveness Theory**

Efficiency was used to measure the relationship between inputs and outputs or how the inputs have been transformed into outputs successfully (Low, 2000, Bartuševičienė & Šakalytė, 2013). In maximizing output, Porter has suggested the elimination of six losses: (1) reduced yield; (2) process defects; (3) reduced speed; (4) idling and minor stoppages; (5) setup and adjustment; and (6) equipment failure. The fewer inputs required for generating outputs leads to greater efficiency. According to Pinprayong and Siengthai (2012), business efficiency was the ratio of input to output, and organizational efficiency referred to the improvement of internal processes of the organization, including organizational structure, culture, and community. Excellent organizational efficiency can lead to the improvement of entities' performance in areas like productivity, quality, and profitability.

The effectiveness business was involved in cost reduction, innovation, value-added creation, output, sales, and quality. Effectiveness is used to measure the extent to which a business attains its goals or the way outputs interact with the economic and social environment. Effectiveness is concentrated on the determination of the policy objectives of the organization (Zheng, 2010).

Meyer and Herscovitch (2001) used an organizational commitment to analyze organizational effectiveness. Commitment takes various forms, including the relationship between leaders and staff, employee identification with the organization, involvement in the decision-making process, and psychological attachment. Shiva and Suar (2010) illustrated that transforming staff attitudes towards an organization from a lower to a higher level could lead to superior performance.

According to Bartuševičienė and Šakalytė (2013), organizational effectiveness was employed to determine goal achievement and improve organizational effectiveness management. This should be considered in six areas, including communication, interaction, leadership, direction, adaptability, and a positive environment (Heilman & Kennedy-Philips, 2011). Moreover, the concept of Total Productive Maintenance covers the entire life of the equipment, including planning, manufacturing, and maintenance (Back, 1988; Fu-Kwun Wang, 2006).



### **2.2.3. Theories regarding Influencing Factors of GBSI in Hotels**

To conceptualize the influencing factors of green business standard implementation in hotels, the following theories were employed: stakeholder theory, institutional theory, innovation theory, resource-based theory, and the theory of planned behaviour.

#### **a. Stakeholder Theory**

Stakeholder theory was defined as the interaction of stakeholders, including suppliers, customers, businesses, employees, investors, and communities. The Stakeholder Theory refers to the values and morals in organizational management and business ethics (Freeman, 1984).

Stakeholders are any group or individual who affects or is affected by the organization (Friedman, 2006; Mbasera, 2015), and these groups, such as regulatory, market, and social actors, can influence businesses and environmental practices (Delmas & Toffel, 2004; Mbasera, 2015). The business was required to be legally compliant with policies and laws (Darnall et al., 2008; Mbasera, 2015).

The market has also influenced an increase in awareness of industrial and/or household consumers and suppliers that forces a businessman to adopt green practices (Han et al., 2010). Furthermore, groups, communities, and unions have influenced business operations to negatively impact the natural environment, and regulatory pressure for environmental implementation and protection has influenced business operations (Kasim, 2007; Mbasera, 2015). Any change in the regulation of environmental sustainability needs managers to adjust with new resources and innovative strategies (Sharma et al., 2007; Mbasera, 2015). Participation of governments and other stakeholders like communities, media, etc. could be sustained (Horobin & Long, 1996; Mbasera, 2015). The previous studies conducted by Sruangporn et al. (2016) and Mbasera (2015) emphasized fund availability as a moderating role that impacts green practice in businesses.

#### **b. Institutional Theory**

The complexity of the theory was identified by Zucker (1987). The theory was defined as the organization being influenced by normative pressures from external sources or within the organization (Zucker, 1987). Using institutional theory (Hirsch, 1975; Fadhil,



2015), different agencies influencing business were explored. The driving forces affecting firm behaviour are socially based on institutions and interconnected organizational networks (Lacobucci & Hopkins, 1992). Three forms of the theories include isomorphic drivers, which are called "coercive, normative, and mimetic drivers" (DiMaggio & Powell, 1983; Mbasera, 2015). Coercive isomorphic drivers refer to the influence of government (Rivera, 2004; Fadhil, 2015). Normative isomorphic drivers emphasized the causes of enterprises' imitation as having legitimate organizational activities, especially in environmental management practices (Ball & Craig, 2010; Fadhil, 2015). Mimetic isomorphic drivers focused on enterprises' imitation of successful competitors (Aerts et al., 2006; Fadhil, 2015). The green issue address of companies was explained due to external pressure (Jennings & Zandbergen, 1995). This theory was used to show how hotels are under pressure from different agencies to adopt environmentally friendly practices such as consumer demand, increasing environmental regulation, managerial concern with ethics, customer satisfaction, and the need for aesthetics (Mbasera, 2015).

### **c. Innovation Theory**

The innovation adoption theory was employed to identify social systems, including external and internal factors that influenced hotel green adoption. Hieu and Rasovská (2017) revealed that individual characteristics and social systems have motivated and influenced the adoption of innovative initiatives in hotels (Valente, 1996). Leadership and organizational innovation have also been directly impacted by the socio-cultural context (Elenkov & Manev, 2005; Hieu & Raovská, 2017). The studies of Chou et al. (2011) and Hieu and Rasovská (2017) established a negative relationship between social influence and behavioral intentions. Krozer (2008), Hieu & Raovská, 2017) indicated that the adoption of environmental technology has reduced business impacts. In contrast, the uncertainty of the environment has caused the challenges of businesses like costs, profits, and standards to promote environmental performance.

Innovation diffusion theory has been proposed to describe behaviors promoting innovation (Gopalakrishnan & Damanpour, 1998; Frambach & Schillewaert, 2002; Lin et al., 2007; Marcati et al., 2008; Hieu & Raovská, 2017). Three types of green innovation to promote environmental performance include green product, green process, and green managerial innovation (Chou et al., 2011; Tseng et al., 2012; Mbasera, 2015)



that have provided advantages for businesses (Chen, 2008; Rao, 2002; Huang, 2016). The differences in organizational innovation adoption by individuals have been connected with the external environment, organizational size, structures, and attitudes (Rogers, 1995). Research by Wan, Luk, and Chow (2005) suggested a positive association between innovative belief and risk-acceptance willingness.

Five factors proposed by Rogers (1995) that influenced the decision on innovation adoption included relative advantage, compatibility, complexity, observability, and triability. (1) relative advantage (1) refers to improvements such as economic benefits, cost savings, image enhancement, progress, convenience, and satisfaction. (2). Compatibility was related to beliefs, values, previous innovation experiences, organizational structure, and employee support. (3) complexity centered on the challenges of learning new skills, technology, or knowledge, which may impede acceptance of innovation (4) Observability concentrated on the level of customer's (user's) understanding of the influence of innovation and (5) Triability that was related to the level of customer's (user's) understanding of the influence of innovation on them.

#### **d. Resource-Based Theory**

The Resource-Based Theory (RBT) was employed in strategic management (Barney, 1991). The benefits of hotel green adoption were explained with the employment of the Resource-Based Theory of Firms developed by Hart (1995) and Fadhil (2015). Internal factors have encouraged the activities of an organization. Those internal factors included competitive advantage and financial considerations. The theory explains resource heterogeneity, which refers to differences between one firm and another and amongst competitors. Those resources include human, physical, and intangible resources (Graci & Dodds, 2008; Mbasera, 2015).

The benefits of environmental consideration were explained by the theory that also emphasized the strengths and weaknesses of organizational resources for green management initiatives and the importance of internal factors that affect an organization's ability to adopt environmental initiatives. To achieve the goals of an organization, human resources, in particular employee training, should be considered so that they can contribute to environmental management to become unique hotels with high-quality services. Some strategies, including training, motivation, evaluation of



performance, and a reward-based environmental strategy, should be implemented to support environmental management systems (Bohdanowicz et al., 2011; Mbasera, 2015).

#### **e. Theory of Planned Behavior**

The Plan Behavior Theory was employed to explain the intention of customers to visit green hotels (Hsu & Sheu, 2009; Mbasera, 2015). The constraints on purchasing green products found by Griskevicius, Tybur, Bergh (2010), and Mbasera (2015) were that the green products were expensive and of low quality, but they provided environmental benefits. The promotion of friendly environmental behavior can be applied. The theory was used to explain the customers' intentions to visit green hotels due to environmentally friendly activities and practices, including products used by customers that can easily be recycled or that are made of recycled paper (Stoner, 2005; Mbasera, 2015).

### **2.3. Previous Studies about Green Hotels**

#### **2.3.1. Green practice**

There was one study on green hotel practices in Egypt, with 45 respondents. The green practice study focused on saving energy, reducing water consumption, and waste reduction. For hotel operations, enormous amounts of fossil fuel energy and electricity were consumed. Renewable energy, energy-efficient equipment, controlling guest room energy consumption with digital thermostats, energy star-qualified products, motion sensors, reflective glass or triple-glazed windows, energy-efficient light bulbs, and daylight are used to measure energy conservation in hotels (Hieu & Raovská, 2017).

Water conservation was measured by measuring amounts of water used daily, water-efficient devices, low-flow toilets, and showerheads, and installing infrared-activated faucets), towel/bed linen reuse programs, fixing leaks in toilets and baths, watering grass and plants early in the morning and late at night to limit evaporation, and recycling greywater (Hieu & Raovská, 2017).

Waste management assessments focused on the amount of wet waste and dry waste. The wet waste included garden waste, food waste, and cooking oil waste. The dry waste included cardboard, plastics, cans, metal, linen, paper, and other garbage. To reduce



hotel waste, guests should be separating hotel wastes, purchasing recycled products, collecting organic kitchen wastes, purchasing food items, donating food leftovers and linens, and grinding remaining soaps for laundry detergent (Abdou A. H. et al., 2020).

The survey carried out by Abdou and Dief (2020) indicated that hotels have implemented integrated water resources management plans. Linen and towels were reused, water pollution was reduced, and dumping was eliminated. Both four- and five-star-green hotels stored rainwater, and the rain was consumed in garden irrigation or flushing toilets. Moreover, low-flow toilets and showerheads with a total average mean of 4.58 were used in hotels.

### **2.3.1. Efficiency and Effectiveness**

The studies by Bergmiller and McCright (2009) and Hieu and Rasovská (2017) have confirmed that green practices could increase efficiency, reduce cost, improve customer response time, improve quality, provide greater profitability, and enhance public image.

### **2.3.2. Influencing Factors for Green Business Standard Practice**

A number of studies have identified influencing factors to encourage the implementation of the green business standard in hotels. The influencing factors included customers' support, government regulation, perceived benefits, hotel owners' or managers' behaviour, and staff support (Hieu & Raovská, 2017; Mbasera, 2015).

#### **2.3.2.1. Customer's Support**

Customer loyalty could encourage green implementation in hotels. Hotel customer loyalty in the long-run could be attracted by the execution of green practice (Ryu et al., 2008; Hieu & Raovská, 2017); and the application of green practice could get more customers, as found by other research (Chan & Hawkins, 2010; Alonso-Almeida, 2012; Hieu & Raovská, 2017).

Customer influence on tourism businesses' environmental practices (Bohdanowicz, 2005; Claver Cortés et al., 2007; De Burgos-Jiménez et al., 2002; Hobson & Essex, 2001; Kasim, 2009; Mahili, 2000; Rodriguez & del Mar Armas Cruz, 2007). Customers' awareness of climate change and global environmental issues has grown, resulting in an increased focus on environmental issues in hotels (Follows & Jobber, 2000). Customers



have increased their demands for environmentally compatible products and services (Clark, 2009; Environmental Leader, 2009; The Star, 2010). The customers were interested in buying environmentally friendly products (Henriques & Sadorsky, 1996; Khanna & Anton, 2002).

Butler (2008) prioritized customer demands and lower costs in hospitality organizations before green initiatives and practices. According to Barsky (2008), the efforts of the hotels in the green program were considered by customers. The customers have accepted the green program differently. Some customers preferred the cheap rooms because they were less attracted and aware of the green program. Some guests took part in the green program because they were able to pay extra money to contribute to environmental conservation. The price of the hotels could influence the preferred hotel (Deraman et al., 2017).

Kirk (1995) believed that customers would consider going elsewhere if they were asked to pay for environmental management. Baker (1996) and Tynan (2009) confirmed that some guests needed environmentally friendly hotels and were willing to pay for further costs associated with the environmental initiative (Boody, n.d.).

Barnes (2007) also believed that customers who were aware of sustainable products were willing to pay money for environmental or green practices to build a strong future. The needs of hotel guests have an impact on green practices (Deraman et al., 2017).

Small business owners confirmed that they were hindering customers' impressions of pampering experiences when recycled paper, soap dispensers, and towel re-usage were introduced for guests (Getz & Carlsen, 2000).

Kirk (1995) showed that the expectations of the customers of in-hospital services were hot water, high-pressure showers, freshly laundered linen, and towel supplies. Hotel owners must have the consent of customers if they want to adopt environmental or green practices (Vernon et al., 2003; Boody, n.d.) Stark (2009) proved that hotel managers/owners have to show their green credentials to the marketplace to be competitive (Boody, n.d.)



#### **2.3.2.2. Government Regulation**

A result of government regulations (Zengeni et al., 2013; Mbasera, 2015). Hotels that failed to apply green policies could be fined in some countries (Mensah quoted in Zengeni et al., 2013; Mbasera, 2015). Legal compliance requires hotels to implement green (Kassinis & Soteriou, 2003; Alonso-Almeida, 2012; Best & Thapa, 2013; Mbasera, 2015). Government regulations could lead hotels to implement green initiatives in hotels (Mensah, 2005; Muazu, 2017).

Kirk (1995) indicated some directives of the European Union (EU) concerning the management of the environment, including national policy, have been introduced and many of these have been implemented. With legislation, Irish hoteliers have challenged high water and waste charges, an increase in energy prices, and the introduction of carbon taxes (Bergin, 2008). Chan (2008) pointed out that some hotels have complied with the formal environmental management system, but the majority of hotels are at a crossroads in environmental management system adoption.

Maasoud et al. (2009) proved that there were hindering green practices because there was a lack of regulation and government support. Irish hotels have failed as green hotels due to a lack of management support and resource environmental practices (Bergin, 2008). According to ISO standards, the multitude of research to adopt a formal environmental management system was required due to the change of structure, planning activities, responsibilities, practices, procedures, and processes for environmental practices.

#### **2.3.2.3. Perceived Benefits**

The benefits were also factors of hotel green practices. These advantages included improved hotel reputation and cost savings (Hieu & Raovská, 2017).

One factor influencing hotel green practices was the hotel's reputation. A number of studies have found that green practices can help hotels improve their reputation. Hieu and Rasovská (2017) indicated that the adoption of green practices in the tourism industry could improve its image and reputation publicly. Another study by Environmental Leader (2007) suggested that two-thirds of 100 CFOs, the largest retailers, which practiced the eco-friendly approach improved their companies' image among consumers and shareholders (Hieu & Raovská, 2017). The green implementation



in hotels provided the achievement of a better reputation (Ayuso, 2006; Nicholls & Kang, 2012; Park, 2009; Muazu, 2017).

Green practices in hotels were also motivated by financial and economic benefits. Several studies have proved that potential cost reduction motivates hoteliers to adopt green practices (Tzschentke et al., 2004; Bohdanowicz, 2009; Llach et al., 2013; Best & Thapa, 2013; Hieu & Raovská, 2017).

Economic benefits were factors of green practice in the hotel (Tzschentke et al., 2004; Bohdanowicz, 2009; Llach et al., 2013; Best & Thapa, 2013; Hieu & Raovská, 2017). The economic benefits from green practices in hotels include profit and cost reduction (Ayuso, 2006; Bohdanowicz, 2005; Kasim, 2007; Muazu, 2017). The green practice has become a necessity for hotels because they intend to increase their financial advantage (Muazu, 2017).

However, some studies have confirmed that green practices in hotels are a constraint for hoteliers because most hotels were built in recent decades without environmental considerations (Deraman et al., 2017). Some challenges of green practice include environmental auditing, impact assessment, and accreditation in hotels that require high-priced certificates (Tzschentke et al., 2008).

#### **2.3.2.4. Hotels' Owners/Managers' Attitude**

The knowledge of hotel managers and owners of the hotels was a factor in green practice in hotels. Some studies claim that a lack of knowledge has hampered business environmental adoption. According to Hillary (1995), it showed that a lack of knowledge of the environmental footprint has hampered environmental practices. Similarly, the lack of knowledge of small business owners' environmental footprint has been regarded as a barrier (Tzschentke et al., 2008). Hillary (2000) identified that a lack of knowledge concerning environmental issues and strategies was a major barrier for small and medium businesses. Levy and Dilwali (2000) also indicated that a shortage of knowledge about effective conservation measures has hampered the adoption of those measures in the environment.

Attitudes toward green practice are predicted with the application of attitudes (Kaiser et al., 1999; Laroche et al., 2001). The hoteliers' knowledge and attitude towards the benefits of green practice could influence their willingness to act on environmental



concerns. In addition, the relationship between external factors and organizational factors, including location, financial situation, and size, was confirmed (Le et al., 2006).

There were differences in the attitudes of small business managers towards the implementation of green practices (Battisti & Perry, 2011; Tilley, 1999). SME owners and managers are concerned about the impact on the environment (Roberts et al., 2006; Tilley, 1999). The attitude of the hotel owners and managers was toward green hotels (Tsai et al., 2014). But, Schaper (2000) has confirmed that there is no positive relationship between personal environmental attitudes and positive environmental performance.

There was a gap between small business owners' attitudes and their environmental behavior (Tilley, 1999). Some hotel managers have confirmed that the business was burned by the practice of environmental management practices (Rutherford et al., 2000).

The understanding of the values of green adoption in hospitality has led to a complacent attitude to environmental practice (McDonough, 2008). The lack of recognition of environmental value in business was a barrier to not implementing environmental/green initiatives in hospitals (Brown, 2006).

Some hotel managers had no intention of applying green practices as they wanted to practice a simple low cost that did not require approval (Donovan & McElligott, 2000). Some managers did not apply green practices, even though they were aware of the impact of their property on the environment. When the managers were clear, the benefits such as cost-saving could be one factor that affects green business practice (Brown, 1996; Taylor, 1997).

#### **2.3.2.5. Staff Supports**

Green practices in hotels have also been linked to higher levels of employee organizational commitment (Enz & Siguaw, 1999; Alvarez et al., 2001; Juholin, 2004; Gan, 2006; Eiadt et al., Mbasera, 2015). Deraman et al. (2017) revealed that the success of a green program was because of the support from employees. Eco-friendly staff should be trained and educated in natural conservation. Simple instructions can be started from the switch-off when it is not used. Managers could encourage



environmental behavior among employees by purchasing eco-friendly products and using them during operations.

Staff need to be put in charge of environmental management to become champions of green practice in hotels (Enz & Siguaw, 1999). The employees' trust was also a challenge for green practice (Leondakis, 2009). Lack of staff training programs and poor communication has led to a lack of interest in environmental adoption.

Allen (2006) argues that employees should be introduced to environmental policy from the beginning, and managers and models of managers should be implemented (Allen, 2006). Staff participation was an important factor that could drive the implementation of green hotels to be successful (Baker, 2009; Deraman et al., 2017).

## **2.4. Research Gap**

This part identifies the research gaps. Milkes (2017) identified seven research gaps: evidence gap, methodology gap, practical knowledge gap, empirical gap, knowledge gap, theoretical gap, and population gap. Through the literature of previous research, five research gaps were identified: evident gaps, knowledge gaps, methodological gaps, theoretical gaps, and population gaps that are filled up by this research.

Evidence gaps were identified. The previous research found some contradictions in the findings of green practices in the hotel industry. The customers' support for green practice in hotels contradicts the previous research findings on customers' support for green practice in hotels. Fedrizzin and Rogers (2002) confirmed the positive support of customers for the implementation of environmental practices in the lodging industry. Serlen (2008) witnessed the more responsible actions of consumers toward conservation of the environment and a strong relationship between customers' environmentally friendly attitudes and their payment intention for green products and services. According to Tynan and McKechnie (2009), some guests who preferred green hotels were willing to pay any extra charge.

The different findings found by Barsky (2008) were that the different guests had accepted different options. The guests, who needed cheap hotel rooms, were less attracted by the green programs of the hotels. Some guests who have participated in this



green program could afford to pay the extra payment for the program. Kirk (1995) stated that customers were unwilling to pay extra prices for environmental programs.

Government regulation of green practices has also led to the growth of environmental consciousness in the industry (Kuunder et al., 2013; Mensah, 2006). Graci (2008) witnessed that low regulation pressure was attributed to a lack of government regulations (Mbasera & Plessis, 2017). Government regulations were the key drivers for the implementation of environmental management systems by hoteliers (Chan & Wong, 2006; Ann et al., 2006; Rivera, 2002).

Yusof and Jamaludin (2014) conducted the study, which confirmed that the government was not supportive of green practices in hotels Hotel C and Resort A. But there was a lack of support from the government on green practices in hotels for Hotels A, B, and Resort B.

For perceived benefits, the conflict findings showed that perceived benefits were predictors of green business-standard implementation in hotels. Some studies have confirmed that cost is a predictor of green practices in hotels (Deraman, et al., 2017). These findings do not support some of the studies. Vernon et al. (2003) pointed out that the cost was the obstacle to green practices in hotels. According to Hirschland et al. (2008), financial stress has become a challenge for green practice in hotels because they need to pay for green certificates. The findings found by Fukey and Issac (2014) indicated that green practice requires a huge investment.

For hotels' managers' or owners' attitudes: There were contradictions in some of the findings of previous research regarding hotel managers' or owners' attitudes towards green practices in hotels. The research done by Tsai et al. (2014) found that the green practices in hotels were predicted by hoteliers' attitudes. Hotel managers' positive attitudes towards green practices in hotels lead to the application of environmental management in hotels (Park & Kim, 2014). Satchapappichit et al. (2013) found that green practice adoption in hotels could be predicted by owner-manager attitudes. These findings disagreed with Schaper's research findings. Positive personal environmental attitudes have no positive relationship with positive environmental performance (Schaper, 2002).



For staff support, the research finding found by Goodman (2000) was that employees who were younger in generation and were educated were more aware of green practices. The training for employees on EMP effects could predict EMP practice in hotels (MBise, 2015).

Second, the knowledge gaps were identified in the previous research. In Cambodia, the topic of green business-standard implementation in hotels has not been studied. These include factors of green business-standard implementation in hotels, effectiveness, and efficiency of green business standards in hotels. The factors, including customer support, regulatory support, managers' support, staff support, and perceived benefits, have not been studied in hotels in Cambodia.

Third, the methodological gaps in the previous research were identified in two articles. The first article referred to the research conducted by Hieu and Rasovska (2017) in Vietnam that focused on secondary data only. The second research was that the information was collected from hotel managers, including owner-manager attitudes, environmental awareness, perceived benefits, green consumers, and competitors (Satchapappichit et al., n.d.) Another research on green practices in the hotel industry: the push and pull factors, which was conducted in the central region of Peninsular Malaysia, including Selangor, Kuala Lumpur, and Putrajaya, was received from only 56 respondents who are the managers of hotels (Aripin et al., 2018). This gap in methodology was filled with this research. This research was conducted with 132 hotels and 119 people who have experience of staying in hotels.

Fourth, the theoretical gaps of the previous studies were determined. There were gaps in previous research on green theory or concepts. The previous research was done in Thailand by Satchapappichit et al. on Factors Influencing Adoption of Green Practices by Small and Medium-Sized Hotels in Thailand. The practices were also those related to EMSs, including energy efficiency, water conservation, waste management, and environmental management systems (EMS). This gap in the previous research on the green concept was filled with this research that focused on additional criteria such as green products used in hotels, hotel activities to support environmental activities, employment for people with disabilities and women, and support for rural communities to improve the rural people's livelihoods.



The CSR approach has been argued to be green in some research, but the relationships between green practices and local community economic and cultural promotion have not been studied. Third, the promotion of women and people with disabilities in hotels has not been studied. Additionally, the efficiency and effectiveness of green business-standard implementations have not been studied. Last, some research on green practice in hotels focused on the quantitative approach and some focused on the qualitative approach. Those gaps mentioned above are filled with this research.

Fifth, population gaps were identified. There was one study focused on a proposed conceptual model of green practices: impacting the tourism businesses and their performances: a case of Phu Quoc Island, Vietnam. Research used primary data gathered from 134 representatives from 134 hotels and 119 people who have experienced staying at hotels in Cambodia.

## **2.5. Summary**

After a review of theories and empirical studies, green business standards refer to saving energy, reducing water, preventing pollution, re-using and recycling materials, using sustainable foods, and designing buildings and space (Hieu & Raovská, 2017). Green practices could decrease solid waste (Manaktola & Jauhari, 2007; Mbasera, 2015). Green standard practice emphasizes not only energy efficiency, water conservation, and recycling, but also clean air (Bohdanowicz, 2005; Mbasera, 2015). Green standard practices in hotels also include environmental protection activities, environmental knowledge, green product usage, and an understanding of environmental problems; solid waste management; effective resource use; air-quality management; liquid waste management; and chemical substance management (MoT, n.d.). Environmentally Sustainable Hotel Management also concentrates on environmental impact reduction, resource and waste management, and the reduction of emissions and pollution (Kirk, 1996; Ustad, 2010).

Efficiency was used to measure the relationship between inputs and outputs. The fewer inputs required for generating outputs leads to greater efficiency. Excellent organizational efficiency can lead to the improvement of entities' performance in areas like productivity, quality, and profitability. Business effectiveness measures the extent



to which business goals are met by focusing on output, sales, quality, added value, innovation, and cost reduction (Zheng, 2010).

Influencing factors identified could affect the implementation of green business standards in hotels. Included are regulatory, market, and social actors (Delmas & Toffel, 2004, Mbasera, 2015), groups, communities, and any unions, media, individual characteristics and social systems, socio-cultural context on leadership and organizational innovation toward greening in hotels, competitive advantage, financial considerations, training, motivation, evaluation of performance and with a reward-based environmental strategy, customers' intentions to visit green hotels (Stoner, 2005; Mbasera, 2015), costs, profits, and standards in promoting environmental performance and internal and external factors.

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## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1. Introduction of the Chapter**

Chapter three describes the methodology that was employed in this research. It outlines nine sections: introduction of the chapter; research design; research context; sampling; research instrument; data collection; data analysis; ethical issues; researcher position; and summary.

#### **3.2. Research Design**

In total, 21 papers regarding this topic were identified and reviewed. Of those five, the research employed qualitative approaches, while 16 papers employed quantitative approaches. Qualitative and quantitative models were used for this research. The quantitative approach was employed to assess the extent of GBSI in hotels, the effectiveness of GBSI in hotels, and the influencing factors of GBSI in hotels, which were gathered from hotel representatives and people who have experienced staying in hotels.

The qualitative approach was used to gather information from government officials on what they have done to support green practices in hotels and from hotel representatives on how they reduce water, energy, manage hair quality, etc. The qualitative model was used with the classification of data based on efficiency and effectiveness, challenges, and motivation factors.

A quantitative model was used to analyze the degree of green business-standard implementation. Descriptive analysis like mean and correlation of green business-standard implementation with energy reduction, water reduction, cost reduction, guest increase, and profit increase was also performed.

Additionally, the quantitative model was related to the means and regression of influencing factors and green business-standard implementation in hotels and the regression of influencing factors and green business-standard implementation in hotels. Descriptive statistics, collinearity, and regression tools were employed for data analysis in this research. A descriptive statistic like the mean was used to analyze the extent of



green business implementation in hotels, the degree of efficiency and effectiveness of green practices in hotels, the degree of motive factors, and the influencing factors for green business-standard implementation in hotels.

The regression tool was employed for quantitative data analysis to study the correlation between influencing factors and the implementation of the green business standard in hostelry industries.

### 3.3. Research Context

Seven locations, six of which were provinces and one of which was a municipality, have been selected for research sites (Map 3.1). Those sites include Phnom Penh municipality, Siem Reap, Battambang, Preah Sihanouk, Kampot, Koh Kong, and Kratie province. The criteria for selecting those areas included previous studies that have indicated the negative impacts of hotels in the areas on environmental qualities like water quality and aquatic resources. At tourist sites where many tourists plan to visit, it is expected that the number of tourists will increase in the future. Those sites that best represent Cambodia, such as Phnom Penh, Preah Sihanouk, Koh Kong, and Kampot, are located in the southwest (coastal areas), northwest provinces (Siem Reap and Battambang), and northeast province (Kratie) (Map 3.1: Research Site).

Map 3. 1: Research sites



Map Source: Map of the World



### 3.4. Research Sampling

#### 3.4.1. Sampling

In total, 608 hotels existed in the target research sites (six provinces and one municipality). Of those, 29 hotels were located in Battambang, 289 hotels in Siem Reap, 209 hotels in Phnom Penh, 57 hotels in Preah Sihanouk, 13 hotels in Koh Kong, eight hotels in Kampot, and three hotels in Kratie provinces (MoT, 2018).

#### 3.4.2. Simple Size

Sampling was defined as the selection process of a statistically representative sample of individuals from the population (Kamangar & Islami, 2013; Majid, 2018). As the population study consists of many individuals for any research project to include as participants, sampling was a critical tool for research (Majid, 2018). Large samples confirmed that it is more accurate than small samples. Moreover, proper sampling methods and a small proportion of the total population can provide a reliable estimation of the population (Zikmund & Babin, 2007; Pham, 2015).

According to Pham (2015), the expected variance of data determines the desirable sample size for quantitative research, and the more diverse the data, the larger the sample size required for accuracy (Hudelson, 1994). The sample size of the descriptive study should be small enough to allow for the intensive study methods being used. At least a sample size of 300 should be required by the researcher. Pham (2015) suggested that the sample size for most research should be greater than 30 and less than 500 (Cavana et al., 2001).

There were 608 hotels in the target research provinces in 2018. Of those provinces, the representatives of 236 hotels have been selected for interviews with a confidence level of 95% with a margin error of 5% using the formula below.

$$\text{Sample size} = \frac{\frac{z^2 * p(1 - p)}{e^2}}{1 + \left(\frac{z^2 * p(1 - p)}{e^2 N}\right)}$$

Source: Creatives Research System

Population Size = N

Margin of error = e

z-score = z

Sample size= 236 respondents

N= 608 hotels

P= 0.5

z= 1.645



### **3.4.3. Sampling Method**

Stratified sampling was a method to generate point sets with a uniform distribution in the hypercube. Space was divided into disjunctive strata. Then a sample was selected from each stratum (Pharr & Humphreys, 2004; Wessing, 2018).

The research participants included hotel representatives and officials of the Provincial Department of Tourism in six provinces (Battambang, Siem Reap, Koh Kong, Preah Sihanouk, Kampot, and Kratie provinces) and one municipality (Phnom Penh). In total, 132 representatives from 132 hotels in the targeted provinces and one target municipality mentioned above have been selected randomly, and the government officials of six target provinces and one target municipality have been selected for interviews to gather information on the general situation of hotels and green practices in the hotels in their provinces. Only five officials from tourism departments have responded to the questions.

Random stratified sampling was employed to select hotel representatives for interviews, and a convenience approach was employed to gain additional information on customers' support for green hotels from 119 people in this research. As mentioned above, 236 hotel representatives from 236 sampled hotels have been selected for interviews with a proportional random stratified sample, and 300 people who have experienced staying in hotels were planned for interview. The researcher has submitted questionnaires and requested 236 hotels in the target research provinces. But the researcher has only received responses from 132 hotels and 119 people who have experienced staying in hotels. Six of the hotels that responded were in Battambang, 47 in Siem Reap, 60 in Phnom Penh, 12 in Preah Sihanouk, three in Koh Kong, two in Kampot, and two in Kratie provinces. The researchers decided that the sample size of 132 hotels was because the time was limited for research and data collection. The second reason was that the research was costly with a large sample size as the research provinces were far from each other. The third reason was that the request letter from the Ministry of Tourism (MoT) for meeting with and interviewing hotels in Cambodia was invalid and could not be used for intervening (table 3.1).



Table 3. 1: Sample size selection

<b>Provinces/Stratum</b>	<b>No of Hotels</b>	<b>Numbers of hotels requested for interviews</b>	<b>No of the hotels responded</b>
Battembang	29	11	6
Siem Reap	289	112	47
Phnom Penh	209	81	60
Preah Sinhakuk	57	22	12
Koh Kong	13	5	3
Kampot	8	3	2
Kratie	3	2	2
Total	608	236	132

(Source: MoT, 2018)

After a recommendation from research committees, in the COVID-19 pandemic period in Cambodia, to identify the customer's support for green practices in hotels, the questionnaires were submitted to 300 people who have experienced staying in hotels in Cambodia to fill in the survey, and among those, 119 people have filled in the survey.

### **3.5. Research Instrument and Data Collection**

#### **3.5.1. Research Instruments**

In this research, an open-ended questionnaire and a mixture of closed-ended questionnaires were used to gather the data from respondents. The first type of questionnaire was open-ended questions related to qualitative data, which were used to gather information from officials and directors of the provincial departments of tourism in target provinces and one target municipality. The information in such a questionnaire was related to hotels' information in target provinces, departments' roles in encouraging green in hotels, disseminating green policies and strategies, being involved with hotels' activities of poverty reduction, helping poor communities, protecting natural resources, improving waste management, promoting air quality management, and increasing organic vegetables and meat in hotels.

The second type of questionnaire was a mixture of closed-ended and open-ended questionnaires. The majority of questions in the questionnaire were closed-ended questions involved with hotel green implementation. The questionnaire was used to gather information and data from the selected hotels.



The mixture questionnaire was outlined into five sections: (a) hotels' information and respondents' information; (b) green business-standard implementation in hotels; (c) effectiveness and efficiency of hotel green business-standard implementation; (d) motive factors for hotel green business-standard implementation; and (e) barrier factors for green business-standard implementation in hotels.

### **3.5.2. Data Collection**

#### **a. Secondary Data Collection**

Secondary data refers to data that has already been published. That data and information include books, newspapers, magazines, journals, online portals, etc. Secondary data is important for increasing the levels of research validity and reliability. The author's credentials, the reliability of the source, the quality of discussions, and the depth of analyses are the criteria for secondary data (Research Methodology, 2019). In this research, the researcher gathered secondary data from online sources, which are credible sources like ministry websites, university websites,...etc.

#### **b. Primary Data Collection**

Primary data collection methods were divided into two groups: quantitative and qualitative methods. Questionnaires with closed-ended questions were used to collect quantitative data. Some approaches to gathering qualitative data include interviews, questionnaires with open-ended questions, observations,... etc. (Research Methodology, 2019).

There were three main data collection steps for primary data collection: research tools and questionnaire development, field data collection, and data validation. The first steps, research tools, and questionnaire development were developed: a questionnaire of closed questions and a questionnaire of open questions. The first type of questionnaire was related to qualitative data, which was used to gather information from officials and directors of the provincial departments of tourism in target provinces and one target municipality. The second type of questionnaire with the majority of close-questions was quantitative data involved with hotel green implementation. The questionnaire was used to gather information and data from the selected hotels.



The second step was that the researcher contacted respondents like hotel managers or owners for the interview. The researcher had hotel contacts offered by the Tourism Department and generated from the Ministry of Tourism's website and had contacted hotel managers to get phone numbers and mail addresses of hotel managers. Due to the selected hotels' locations in different provinces, there were three ways of information collection: email, phone-calling, and a face-to-face interview.

For the third step, field data collection was done using questionnaires that had been developed. A few approaches have been used to collect information, including interviews and observation. As previously stated, three types of interviews were used to interview respondents: mail-to-respondents to fill out questionnaires, phone interviews, and face-to-face interviews. Through the face-to-face interview, the researcher has received a high rate of survey completion, answers from respondents, and assists respondents with unfamiliar words or questions (National EMSC Data Analysis Resource Centre [NEDARC], n.d.). Furthermore, because those people were too far away and it was difficult to meet them in person, a phone interview was proposed to save money. This method was fast and could assist respondents with unfamiliar words (NEDARC, n.d.). Another approach was that observation was used to explore additional information that had not been stated in the questionnaires. After the daily interview, all the data in the questionnaires provided by respondents was reviewed and finalized to ensure that all the data in the questionnaire was accurate and usable. The numbers from 1 to 132 were coded questionnaires from 1 to 132.

### **3.6. Data Analysis**

Before multiple linear regressions were done, multiple linear regression assumptions were tested. Four assumptions were made, including linearity, normality, homoscedasticity, and multicollinearity. To test linearity, a statistical tool of matrix scatter plots were used to analyze linearity. Normality, histogram and P-P normality, homoscedasticity, and scatter plots were used to see the equality of distribution of points of data. The last point was that multicollinearity was tested to assess tolerance and VIF.

Qualitative and quantitative approaches were employed for this research. This study's Research Objectives 1, 2, and 3 Qualitative data analysis was used to classify and



interpret linguistic material to make statements about implicit and explicit dimensions and structures of meaning-making. Qualitative data analysis was also applied to describe issues in the field, structures, and processes in routines and practices (Flick, 2013).

For the qualitative data analysis, the layout was designed with categories based on the research contents and thematic areas. Each of the contents was sub-categorized by participants. The collected information from the questionnaire was reviewed quickly by the researcher. The collected information from the questionnaire was noted and classified in each of the sub-categories in the research content. The information on each of the contents was interpreted.

To address objective 1 of the research, both qualitative and quantitative data were used. Secondary and primary data were used. Research objective 1 was to assess the extent of green business-standard implementation in hotels. In total, 58 statements were produced, and each of the statements was ranked by respondents from 1 to 5. "1" represents "Strongly Disagree," while "5" represents "Strongly Agree." Those statements referred to the green business standard and human resources, environmental protection (like water, energy, and waste), promoting green products and local economic development and environmental promotion, and local cultural promotion.

A descriptive statistical tool, including means, was used to analyze the degree of GBSI in hotels as the measurement of the GBSI data in hotels was the ratio. A "mean" was employed to measure central tendency. The arithmetic mean or mean was an average that was computed by adding all the values in the data set divided by the number of observations in it (Pharmacother, 2011). To make it easier for readers, the bar charts of the average score of green business-standard implementation in hotels ranked by respondents were used. The descriptive statistics tool (the average of each of the 58 variables) was calculated. Those data and information included the average score of energy saving in hotels, the average score of water saving in hotels, the average score of waste management in hotels, the average score of air quality management in hotels, the average score of green product use in hotels, the average score of green incentive and the degree of GBSI in hotels. The percentages of energy sources, plans, and energy prices from secondary sources were calculated.



The qualitative data from secondary sources was used in addressing objective 1 of this research, including Cambodia's energy, framework, and instrument of water resource management, water concerns and challenges, hotel water sources, water price for the commercial sector, organic green legal framework, and factors influencing the score of green business-standard implementation.

To address objective 2 of the research, qualitative data and quantitative data analyses were employed. The qualitative model was employed to explain how GBSI in hotels contributed to water and energy reduction, cost reduction, guest increase, and profit increase.

In quantitative analysis, descriptive analysis tools (average, maximum, and minimum) and linear regression tools were employed in this research. The "mean tool" was employed to analyze the average score of effectiveness and efficiency, the amount of water, energy, and waste usage in hotels, and the reduction of water, energy, and waste usage in hotels. A "mean" was employed to measure central tendency. The arithmetic means, or mean, was an average that was computed by adding all the values in the data set divided by the number of observations in it (Pharmacother, 2011).

Quantitative analysis tools were employed in this research: simple linear regression models. The regression analysis tool was used to analyze relationships between one independent and one dependent variable (Marko Sarstedt & Mooi, 2014).

A simple linear regression tool was employed to test the null hypothesis that "there is no significant prediction of efficiency and effectiveness like the scores of energy and water reduction, waste management and air quality improvement, cost reduction, guest increase, and profit increase" by "green business-standard implementation in hotels."

Five models of simple linear regression were employed: the relationship between "GBSI in hotels" and "EE1 (energy reduction)", "GBSI in hotels" and "EE2 (water reduction)", "GBSI in hotels" and "EE3 (cost reduction)", "GBSI in hotels" and "EE4 (guest increase)", "GBSI in hotels" and "EE5 (profit increase)."

Before simple linear regression was carried out, the simple linear assumptions were tested using histograms, normal P-P plots, and scatterplots to test model 1: GBSI and



EE1, model 2: GBSI and EE2, model 3: GBSI and EE3, model 4: GBSI and EE4 and model 5, GBSI and EE5.

Descriptive statistical tools were used to analyze the average scores of effectiveness and efficiency, the amount of water, energy, and waste usage in hotels, and the reduction of water, energy, and waste usage in hotels.

To address objective 3 of this research, quantitative analysis, and quantitative analysis were used. The qualitative analysis tool was used to analyze factors like customer attitudes, government regulation, perceived benefits (financial benefits and hotel image enhancement), hotel manager/owner attitudes, and staff support for green business-standard implementation in hotels.

Quantitative analysis was employed in this research, including descriptive statistical tools, multiple linear regression, histograms, normal P-P plots, and scatter plots. A descriptive statistical tool was used to analyze the average score of motive factors for green business-standard implementation in hotels. To test linearity, normality, and homoscedasticity, histograms, normal P-P plots, and scatter plots were used to test the multiple linear regression assumptions of motive factors of green business-standard implementation in hotels. The multiple linear regression model was employed to test the linear relationship between five influencing factors (independent variables) and one dependent variable (green business-standard implementation in hotels). Five independent variables (influencing factors) include IF1: "Customers' Support", IF2: "Government Regulation", IF3: "Perceived Benefits", IF4: "Hotel Managers'/Owners' Attitude", and IF5: "Staff's Support".

To address objective 3 of this research, quantitative and qualitative analyses were applied. The quantitative analysis was used to analyze how influencing factors affected green business-standard implementation in hotels.

Quantitative analysis included descriptive statistical analysis, linearity, normality, homoscedasticity, and multiple linear regression models. The descriptive statistical analysis tool was used to analyze the average scores of influencing factors for green business-standard implementation in hotels.



Multiple linear regression was employed to test the null hypothesis "There is no significant prediction of green business-standard implementation in hotels" by influencing factors like IF1: "Customers' Support", IF2: "Government Regulation", IF3: "Perceived Benefits", IF4: "Hotel Managers'/Owners' Attitude" and IF5: "Staff's Support".

### **3.7. Ethical Issues**

The purpose of the research was to inform the respondents. The information on confidentiality was mentioned in the first part of the questionnaire. The questionnaires with confidential information have been submitted to hotels in advance. Moreover, the researcher has produced a non-disclose letter and submitted it to hotels in order to ensure that all information is kept confidential. Before starting the interview, the information provided by respondents was kept confidentially. The respondents have also agreed to provide information about their hotels.

### **3.8. Researcher Position**

The research findings are valid. It was confirmed that most of the research findings were similar to the research findings of previous studies. First, regarding the degree of green business-standard implementation in hotels, most parts were similar to other research in other countries. Those included staff trained and educated on energy saving, water saving, waste management, and air quality management except for a few areas of this research that have disagreed with others, like using rainwater containers to store rainwater for use in hotels, reusing and recycling water for other purposes, recycling kitchen waste, and employing women and people with disabilities. (b) efficiency and effectiveness of GBSI in hotels. The influencing factors of green business-standard implementation found by this research were similar to those found in some other research.

### **3.9. Summary**

In summary, qualitative and quantitative models were employed. Seven locations, six of which are provinces, and one of which is a municipality, were selected for research sites. In total, 236 out of 608 hotels and 300 people who had experience of staying in hotels were selected for interviews, and 132 hotel representatives and 119 people



provided information about hotels. Stratified sampling was applied. Open-end questionnaires and a mixture of closed-ended questionnaires were used to gather the data from respondents. Multiple linear regression assumptions were tested. Descriptive statistical tools, simple regression, and multiple linear regression were used to analyze quantity data while classification was employed to analyze qualitative data.



## **CHAPTER FOUR**

### **FINDINGS**

#### **4.1. Introduction of the Chapter**

This chapter presents the research findings on the following: the degree of business standard implementation in hotels; the efficiency and effectiveness of GBSI; and the influencing factors of GBSI in hotels. Six parts are outlined. (1) the chapter's introduction; (2) the extent of hotel green business-standard implementation; (3) the effectiveness and efficiency of hotel green business-standard implementation; and (4) influence factors for implementing the green business standard in hotels; (5) hotel-customer relationships; and (6) a summary of the findings.

##### **4.1.1. Demographic Data**

###### **a. Hotel Representatives**

The respondents from 132 hotels have been interviewed. Table 4.1 indicates that the majority of the respondents were managers of the hotels (84.8 percent), as hotel owners were busy with tasks that made it hard to make appointments for meetings with them. Hotel managers were aware of the general information on hotels and management knowledge of the hotels. But some hotel owners (7.6 percent) have allocated their valuable time to meeting the researcher to provide information about the hotels to the researcher. Generally, some hotel owners have been accompanied by some of their staff or senior staff to meet the researcher during the interview so that those staff could provide more detailed information about the hotels to the researcher. It has been noticed that the majority of the owners that the researcher met during field data collection were foreigners like British, New Zealanders, and Filipinos, while some of the hotel owners were Cambodians. Other positions of the respondents were at lower levels, like supervisors or accounting officials. Those staff who were not hotel managers could also manage and provide their hotels' information because the research questionnaires had been submitted to hotels in advance. When the researcher has requested hotels for the interview, the questionnaires have been attached with those invitation letters (each questionnaire was attached to each hotel). This approach has enabled respondents to fill in the information and check with hotel leaders or managers to fill it in. Before the interview, most of the information about some hotels had already been filled in the



questionnaire, and the researcher only verified some of the information during the interview session.

The ages of the interviewed respondents were classified into four categories: 21–30 years old, 31–40 years old, 41–50 years old, and 51–60 years old. Table 4.1 showed that the majority of respondents (52.3 percent) were in the second age category (31 to 42 years old), as the levels of management positions require more work experience and seniority in their work concerning hotel work and hotel management. The combination of three categories (first range, third range, and fourth range) reached less than 50 percent of the total respondents, while the second range of ages was more than 50 percent of the total respondents. The first range aged from 21–30 was in other positions like accounting staff, desk supervisors, human resource supervisors, and assistants to managers.

The educational degrees of the respondents were grouped into four classifications: secondary schools, high schools, bachelor's degrees, and master's degrees. Most of the respondents have graduated with bachelor's degrees while few respondents have graduated master's degrees. It was noticed that most of the respondents have graduated from universities with bachelor's degrees (81 percent). The respondents who have high degrees (bachelors or master degrees) have worked with large scale hotels and professional hotels in particular in Phnom Penh municipality, Preah Sihanouk and Siem Reap provinces while the respondents holding bachelor degrees or below bachelor degrees have worked with smaller-scale hotels, the majorities of which were located in researched target provinces like Kampot, Kratie, Battambang, and Koh Kong. Few respondents (10% of the total respondents) who have graduated high school and secondary school levels have worked with small-scale hotels, the owners of which were their relatives (nepotism). Nepotism has been applied in some hotels because the hotel owners have trusted them and have assigned them to become management levels like general managers of hotels. But such cases have been observed to occur in small-scale hotels and unprofessional performance hotels.

Table 4. 1: Respondents (Hotel Representatives)

<b>Respondents' Demographics</b>		<b>Percent (n=132)</b>
Position of Respondents	Owner	7.6
	Manager	84.8
	Others	7.6



	Total	100.0
Age of Respondents	21-30	28.0
	31-40	52.3
	41-50	16.7
	52-60	3.0
	Total	100.0
Education	Secondary School	.8
	High School	9.1
	Bachelor Degree	81.1
	Master Degree	9.1
	Total	100.0

Source: Developed by the researcher

### **b. Respondents (Customers)**

To assess the customers' support for green business-standard implementation in hotels, 118 people who have experienced staying in hotels were interviewed. Of those people, 60% were males, while 40% were females. Most of the respondents were aged 31–40 years old (28%) and 41–50 years old (50%). Most of the respondents graduated with a bachelor's degree (44%) and a master's degree (41%). Few respondents graduated from high schools (12.7%) and received Ph.D. degrees (1.7%).

Table 4. 2: Respondents (Customers)

Respondents' Demographics		Percent (n=118)
Sex	Males	60
	Females	40
	Total	100
Age of Respondents	=<20	3.4
	21-30	28.0
	31-40	50.0
	41-50	11.9
	52-60	5.9
	>60	0.8
	Total	100.0
Education	High School	12.7
	Bachelor Degree	44.1
	Master Degree	41.5
	PhD	1.7
	Total	100

Source: Developed by the researcher



#### **4.1.2. Sampled Hotel's Information**

Three types of hotel ownership were identified: hotel owners, hotel renters, and joint ventures. Hotel owners refer to the people who have owned hotels, including hotels, lands, hotel buildings, etc., and do business in the hotel business, while hotel renters refer to the people who have rented buildings, lands, etc. to run the hotel service business. Another type was a joint venture that involved two or more than two owners who shared their resources (human, money, and assets) to run the hotel business. Table 4.3 indicated that many hotels (74.2 percent of the hotels) were in the first category, where hotel owners run hotel businesses with their land and buildings. Mostly, they were Cambodians because they had their own assets, including lands and buildings in Cambodia, or some were Cambodians who had lived abroad, and they had the financial resources to do hotel business in Cambodia. It has been reported that 22% of hotels have been rented to run a hotel business. The hotel renters were foreigners who could not own land properties in Cambodia, and they required hired land and buildings to run a hotel business. According to the Law on Investment in the Kingdom of Cambodia, which was adopted by the National Assembly in Phnom Penh on August 4, 1994, it indicates that the ownership of land for investments was encouraged only to national people who were Cambodians or legal entities that owned directly more than 51% of the equity capital (National Assembly, 1994). People who have rented buildings or hotels for hotel purposes include British, Japanese, New Zealanders, Chinese, and French nationals, among others. The third type of ownership was a joint venture. The joint venture was a collaboration of Cambodians and foreigners to do hotel business. For example, Cambodian people had land, while foreigners had money to construct buildings and run hotels. They have both shared resources to run a hotel business, and they have both become the owners of the hotels. The third type of ownership presented a lower percentage when compared to the other types of ownership.

The hotels have been rated by the Ministry of Tourism and five levels/scales of the hotels have been classified. Hotels with one star received a score of 200 with at least 80 pieces of equipment, hotels with two stars received a score of 280 with at least 100 pieces of equipment, hotels with three stars received a score of 400 with at least 50 pieces of equipment, hotels with four stars received a score of 600 with at least 100 pieces of equipment, and hotels with five stars received a score of 800 with at least 150 pieces of equipment (Cambodia Tourism Rating System [CTRS], n.d.). The assessments



focused on (1) location, access and landscape, (2) car park facilities (CPF), (3) reception lobby, (4) lift, (5) size of rooms, (6) room facilities, and (7) room furniture and (8) bathroom amenities (CTRS, n.d.). The hotels, the representatives of which were interviewed, were classified into six classifications: un-rated hotels, 1st-star hotels, 2nd-star hotels, 3rd-star hotels, 4th-star hotels, and 5th-star hotels. The majority of the sampled hotels were unrated (29.5%), 3rd-star hotels (18.9 percent), and 4-star-hotels (28 percent). Some hotels that started a few years ago have not been registered to receive certification from the MoT. It was reported during the interview that many buildings have been constructed in Phnom Penh for a few years for sales, but those buildings could not be sold as per their plans. Owing to this trend of the building boom, some of those physical buildings have been converted into hotels or apartments with lower prices. It has been indicated that 1st-star hotels (6.8 percent) and 5th-star hotels (3.8 percent) consist of fewer percentages in comparison with the other interviewed hotel classifications mentioned above.

Swimming pools have been observed in most hotels in Cambodia as hotel guests require those swimming pools for their entertainment besides staying at hotels. Table 4.3 suggests that 72.7 percent of the respondents have confirmed that their hotels consist of swimming pools, and no swimming has been observed in 27.3 percent of the sampled hotels. Barriers were identified for hotels without a swimming pool setup: space, price, and target guests or audience. One barrier was the limitation of space in the hotel yards. The expensive price of land plot rental for hotel businesses was another barrier. The hotels which have targeted Cambodians have not set up swimming pools because most of the Cambodians cared about the lower prices rather than hotels with high prices and swimming pools.

Whether to stay at hotels or not, the restaurants in the interviewed hotels were considered one of the attractions for hotel guests. Some hotels have served only free breakfasts for hotel guests, while some hotels have served three meals for hotel guests, like breakfast, lunch, and dinner. Table 4.2 illustrates that most of the sampled hotels had restaurants (87.1%). The hotels have produced waste from hotel restaurants based on the number of restaurants and the number of meals they have offered to guests. The hotel's breakfast restaurants have produced less kitchen waste than three-times-meal hotel restaurants. The restaurant waste was generated more from restaurants



serving Asian food, including Khmer food, than from hotel restaurants serving European food.

Table 4. 3: Hotel information

<b>Hotel Information</b>		<b>Percent (n=132)</b>
Ownership	Owner	74.2
	Rental	22.0
	Joint	3.8
	Total	100.0
Classification	Unrated	29.5
	1 star	6.8
	2 stars	12.9
	3 stars	18.9
	4 stars	28.0
	5 stars	3.8
	Total	100.0
Swimming Pool	Yes	72.7
	No	27.3
	Total	100.0
Restaurants	Yes	87.1
	No	12.9
	Total	100.0

Source: Developed by the researcher

#### **4.2. Hotel Green Business Standard Implementation Extents**

This section aims to assess the extent of green business-standard implementation in hotels. Questions 1 to 58 in the questionnaires covered the extent of green business-standard implementation in hotels. For those questions, 58 statements were produced with five degrees of agreement from the respondents: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree. This section of "the degree of green business-standard implementation" was divided into human resource and internal practices, environmental protection (energy usage, water usages, waste management, air quality management), promoting green or organic products, and local economic development (green product usages, green incentives, and job opportunities), environmental awareness for local communities, and the promotion of local culture and tradition). Even though the data mentioned above was ordered, the data was entered into SPSS on a scale so that the data could be computed on their average score. The average scores of "the degree of green business-standard implementation in hotels" were computed through descriptive statistical analysis.



Table 4.4 below shows the average score of eight sections: human resources and green practice; energy usage; water usage; waste management; air quality management; green product usage; green business incentives; and environmental awareness of hotels for local communities. Table 4.4 indicated that three sections were scored at high levels if those variables were compared to other sections of green business-standard implementation. Those sections that scored highly included energy usage and water usage, as well as air quality management. Water usage and energy usage were scored at high levels as those variables were directly related to hotel cost reduction. When hotels have more innovation to use devices that could save water and energy, it could reduce their costs.

Table 4. 4: Averages of hotel green standard implementation degree

	N	Min	Max	Mean	Std. Deviation
Human Resource and Green Practice	132	1.00	5.00	2.6667	.91577
Energy Usage	132	1.29	5.00	3.8701	.80173
Water Usage	132	1.57	5.00	3.3247	.77407
Waste Management	132	1.00	4.63	3.0549	.89051
Air Quality Management	132	1.60	5.00	3.7348	.94084
Green Product Usage	132	1.00	5.00	2.6010	1.37618
Green Business Incentive (Job Opportunity)	132	1.00	4.00	1.7089	.86446
Environment Awareness for Local Community and Cultural Promotion	132	1.00	5.00	1.9848	.96228
Valid N (listwise)	132				

Source: Developed by the researcher

#### 4.2.1. Human Resource and Internal Green Practices

The average score for human resources and internal practices was 2.66% (table 4.3). That indicates that the hotels have less applied in this part. The environmental information of a few interviewed hotels was available. There was no environmental information that allowed hoteliers to access environmental information, and no environmental information was available to guests in the majority of the hotels interviewed. The majority of hotel staff and management staff were not aware of and were not familiar with environmental knowledge. This was a result of a lack of collaboration between hotels and CSOs, which have worked on environmental initiatives in target provinces. The ministries or departments have not produced the



materials relevant to environmental knowledge and information that have enabled hoteliers and hotel guests to access that information and post the environmental materials or information in hotels so that guests or visitors can access those documents.

Capacity buildings on environmental knowledge for staff: The general topics of the environment have been shared with the staff. Most of the sampled hotels, in particular, the medium and small-scale hotels, focused only on water, energy, and waste agendas as those natural resource usages were directly related to the increase in operating costs of the hotels. General environmental knowledge was not an important and interesting topic for most of the sampled hotels yet. Another factor was that no human resources with environmental knowledge were available in hotels to deliver services to staff. Outsourcing environmental training for staff was an additional cost for hotels, and any environmental training course has a cost. The staff recruited to work in the hotel should be qualified for the hotel's requirements even though they have some basic knowledge of the environment.

The participation of hotels in environmental activities: interviewed hotels haven't made clear plans to participate in environmental protection activities. These activities were related to planting tree campaigns, forestry days, campaigns on "no rubbish under tables," rubbish collection campaigns, and events with rural communities. This was for some reason: environmental knowledge was not available for hotel staff and managers of some hotels. Besides that, they haven't had clear plans to promote the environment, in particular, any activities involving tree plantation and rubbish collection. Lack of collaboration between hotels and ministries or departments and non-profit agencies. No connection between rural communities and hotels was also a barrier. An additional cost for hotels for sending staff to work with communities in environmental promotion was identified. Staff's knowledge and the intention of management were important barriers as well. But few hotels have observed that they had planned to send their staff to work with communities to join in tree planting campaigns and also facilitate their guests' participation in tree plantation campaigns with local communities.

Green growth information in hotels: Green growth information in hotel rooms was not available in hotels. Hotels' managers and staff were lacking an understanding of green growth. Moreover, they could not access green growth information and materials in hard copies. Even though the tourism ministry and departments have offered some



orientation sessions on green growth for hotel representatives, the hotel managers or staff of some sampled hotels have not participated in the orientation workshops or meetings as they were busy with internal tasks in hotels. Some hotels have been challenged in recruiting staff. The hotels were, therefore, lacking staff to implement the green practice. Human resource shortages and difficulties in staff recruitment have demotivated hotels to apply green standards in their hotels. Moreover, the existing staff of the hotels has been prioritizing internal tasks rather than external tasks.

For some reasons below, the majority of hotels have not yet participated in green standard competitions or campaigns, except a few hotels. Hotels could not access all the information concerning the green from the ministry and departments yet. The time constraint was also a barrier to joining in the competition. During the interview, hotel managers complained that there was insufficient staff to manage the existing work of the hotels. Hotel managers, therefore, didn't have time to review green awarding requirements, review hotel documents, and prepare hotels to meet the awarding requirements. Those factors mentioned above were challenges for applying and participating in the green standard award competition. Some hotels have just started their operations, which has led to poor communication with the ministry and departments and a lack of information about green practices.

According to an in-depth interview with one lady in Kampot province, she has stated that "I have been working for this hotel for three years. My hotel has never applied to join in the green award competition as I have not been aware of this information about the competition and I have not been informed to apply for this green competition."

The activities of hotel staff in helping communities: most of the sampled hotels have not had any programs or activities to work with local communities due to a disconnect between hoteliers or hotel managers and rural communities. The programs that were designed to support local and poor communities have required additional budgets for implementing the programs. This approach could lead to an increase in the cost of hotel operations. Hotels do not have sufficient staff to work on such social work as the staff has prioritized their internal roles and responsibilities with hotels. They were not aware of any work in rural communities. They lacked the human resources to think about helping communities. Hotels didn't have clear strategies to help poor communities. A



lack of connection agencies to bring and connect hotels and rural communities was identified. A lack of hotel management knowledge and understanding of social activities was also a barrier.

The allocation of the budget for CSR activities of the hotels: The majority of the sampled hotels have not allocated the full amount of the budget for social and corporate social responsibilities (CSR). The reasons were that hotel managers and hotel owners had not been aware of corporate social responsibilities yet. CSR activities need additional money to implement CSR programs. Lack of a CSR plan could make it hard for them to be aware of what should be achieved in the goal of social work. There was less demand for hotel customers' social work. But generally, it has been noticed that some hotels have also contributed around \$5,000– 15,000 for social activities through the Cambodia Red Cross, Clean City, and Rubbish Collection Campaigns based on requests from authorities and departments.

A manager of one hotel in Kratie province has confirmed that "I have not allocated a budget in the budget plan, but when the tourism department is organized, the Krong administration or provincial administration has requested a budget for any activities, the hotels' manager has donated around \$5,000 a year to contribute to organizing some events like Songkran, clean city campaign, world tourism campaign, water festival."

Another type of hotel activity was that hotels have allowed NGOs, which have worked on social work in terms of charities, to keep charity boxes in hotels, which have enabled hotel guests to share their charities. Annually, the clean city was an initiative of the Ministry of Tourism together with other departments and local authorities. It has been reported that the departments have requested a budget from hotels to contribute to these events and they have contributed some budget for those events.

However, few big hotels have been allocated a clear amount of budget for helping rural communities. Some forms of CSR have been introduced: supporting school materials for poor students; school building construction for students; constructing water pumping wells for poor communities; processing community products with benefit-sharing to local communities; and supporting orphan children in orphan centers.

As clarified through an in-depth interview, the manager of a hotel who was a shared cost of Cambodian and Malaysian people in Phnom Penh has said, "I have reserved a



budget for supporting two water pumping wells for poor communities a year. But I could not support constructing water pumping wells for the rural communities that are far from Phnom Penh municipality. I need to look for a place to construct water pumping wells that my colleagues can go to and return to within a day. My colleagues could not stay in rural communities overnight as all of them are busy with the internal tasks of the hotels. If I stay in the villages, no one can arrange the tasks in hotels. "

The manager of a hotel owned by the Japanese said, "My hotel started only two years ago in Cambodia. My hotel owners have constructed two school buildings for children in rural areas. In 2019, when the hotel owner, who is Japanese, visits Cambodia, he also plans to go to rural communities to find education needs and challenges. If there were some educational problems, like a shortage of school buildings for children to learn in, they might donate more school buildings so that the students in rural communities and from poor families could access education. This approach can help poor and rural students get access to education and classes.

A better appreciation of green in this part was that the staff assigned to environmental management and staff instruction on energy device switching on and off: (a) Two types of staff assignments in environmental management in hotels were that one staff member had been fully assigned to environmental management in hotels and the second one was that the environmental tasks in hotels have been integrated with existing staff like guard staff and managers. It has been observed that one full-time staff member has been responsible for environmental promotion in hotels for large hotels. For medium and small-scale hotels, the responsibilities of environmental promotion in hotels were integrated into existing roles of staff, and the focal person in charge of environmental management in hotels only focuses on energy and water devices in hotels to make sure that all of those devices are maintained.

(b) staff training on how to turn on and off energy devices: Almost all of the sampled hotels regarded the actions of the instruction for staff to switch off and on as the most important point. The instruction for staff on switch-off and switch-on could increase the understanding of staff about the importance of water and energy. Additionally, the water and energy waste in hotels could increase the cost of hotel operations. When staff were aware of the importance of water and energy-saving and waste reduction, they could be proactive in switching off and switching on when guests have left rooms or hotel open



space. The new staff were oriented. Meetings were held to discuss energy and water usage in hotels, and hotel staff and managers attempted to devise strategies and techniques to reduce energy and water usage in hotels. An increase in water and energy consumption was directly related to an increase in hotel operating costs. The increase in hotel operation costs was very sensitive for hotel owners. When water and energy were not saved and not effectively consumed in hotels, the payments at the end of the month would increase, which was questioned by hotel owners and managers. The agenda of water and energy was often discussed weekly and monthly.

#### **4.2.2. Environmental Protection**

##### **a. Energy Management**

Interviewed hotels have managed their energy use quite well (score 3.87). The high energy-saving: new staff were introduced to energy-saving and materials used to reduce water usage. The topics of energy saving were discussed in weekly and staff-monthly meetings. The quantities of energy usage in hotels were recorded and shown in weekly meetings. When the usage of energy for hotels increased, the topics of energy increases were discussed in staff weekly and monthly meetings to find a way to reduce energy usage. The reduction of energy usage in hotels could lead to an ease of cost for hotel operations.

Energy-efficient devices: The energy devices in hotels included bulbs, air conditioners, freezing boxes, televisions, elevators...etc. The high level of scores in variables was because some types of energy devices were needed to change annually as they have a short life. For example, lamps or bulbs were usually changed annually. Those last versions of lamps and devices can save energy. The sellers or private companies have played important roles to share the knowledge of economic and environmental benefits of energy devices for hoteliers or hotel managers when the company staff has sold those products to hotels.

Motion sensors have been installed in some areas in the hotels, including elevators, stairs, etc. Sensor usage could save energy effectively as bulbs lighted up when the presence of guests was detected. If bulbs were off when people were not there, some hotels did not consider sensors for use in their hotels. Hotel colleagues and managers



felt that they had charged a high fee from guests, but they still tried to reduce the cost by saving energy.

Solar panel usages in hotels: almost 50% of the sampled hotels have used solar. Owing to the capacities of solar panels in producing energy which could not supply the whole needs of hotels but the electricity from solar panels could only supply electricity with some parts of hotel energy needs. Motive factors to use solar panels were related to knowledge of management and hotel owners on economic benefits and environmental benefits of solar panels, the space for setting up solar panels was available on the hotel roofs. Solar panels were regarded as clean energy. Hotel managers and owners have felt that they could benefit from solar panel usage. The sunlight in Cambodia was available in the dry season and some availability occurred in rainy seasons. Some hotels have not used solar panels because of some reasons: hotel owners have not agreed that solar panels are clean energy. The substance for producing solar panels has been assumed to be from mining. Mining extract has caused many natural resources on the earth and human health. The second reason was that some hotels have not had sufficient space for setting up solar panels. The solar panels have been observed to be set up on roofs of the hotels. Some hotels have not set up rooms and top stairs have been decorated to be sky bars that could be used to make it more attractive for guests. Lack of understanding of solar panels was another barrier for hotel managers/owners.

A foreign respondent who is the owner of a hotel in Phnom Penh has said "Until now, I haven't believed that solar panels are clean energy. This is because of any substance used to make solar panels. How much mining has been extracted to produce the subsistence for producing solar panels? The mine extraction for solar panels has also had negative impacts on the environment and local communities. Moreover, I have rented a building to run a hotel business for a high fee, and no space is available for solar panel installation.

Glass installations with windows: plenty of the interviewed hotels have been equipped with glass windows. The glass window prices were cheap that can be afforded by hoteliers. The affordable glass prices have encouraged hoteliers to set it up in hotel windows. The beauties of set-up glass were also attractive for guests that have motivated hoteliers or hotel managers to prefer glass windows. Moreover, when glass windows were set, sunlight could penetrate rooms in the daytime without lighting on.



Hotel glass windows have enabled guests who have stayed in hotels to see the views of the city and the river. This glass setup on windows can attract guests to stay in hotels.

The usage of energy-saving air conditioners: It was easy to update to a new version of air-conditioners as the prices were not so high. The prices could be afforded by hoteliers. Most hotel managers and owners felt that the air-conditioner usage was related to the cost of energy consumption. The air-conditioners of some hotels have been built so far and the air conditioners' life has already ended, which has enabled hotel owners/managers to decide to change to energy-efficient air-conditioners that could use efficient energy. The companies or shops, which have been sold, were another driver to motivate and influence the decision of hotel managers and owners to consider energy-efficient air conditions that could save energy. When energy device company employees can explain the benefits of energy-efficient devices in terms of economics and environment.

Guests' participation in saving energy below 24<sup>0C</sup>: Some of the hotel guests have tried keeping the temperature below 24<sup>0C</sup>. Some hotels have automatically set air-conditioners at 24<sup>0C</sup>. But when hotel guests entered hotel rooms, they have tried adjusting to a lower temperature in hotel rooms as they needed a temperature below 24<sup>0C</sup> and some guests have tried adjusting the room temperature to minimize temperature (16<sup>0C</sup>). Few hotels have been observed to have contributed to saving energy by setting room temperature around 25<sup>0C</sup> or above 25<sup>0C</sup> and some foreign guests from Europe have kept windows open and switched off all air-conditioners. Those kinds of hotel guests have been more aware of environmental conservation and its importance.

Set up fans at open spaces in hotel buildings: Fans have been observed in a few hotels. The fans were set up in open spaces in hotels. Hotel managers thought that the less energy of using fans than air-conditioning could lead to a reduction in the costs. Only a few hotels owned by foreigners have been set with fans in open spaces and their target guests were foreigners from Europe and other developed countries where the general education on the environment was high. The majority of the sampled hotels have installed air-conditioners as their target guests have preferred cooling temperatures in hotels. Additionally, hotel owners/managers had concerns about the complaints from hotel guests if the temperature was not cold enough for them. Local guests or



Cambodian guests have preferred cold temperatures. Chinese guests have been reported to prefer cold temperatures.

Solar/gas used to heat water in hotels: hot water was available for all sampled hotels in the target provinces. But only some hotels have used solar or gas to produce electricity to heat water. This application of energy-efficient devices in hotels was because using solar or gas could reduce the electricity that could have had positive impacts on hotel operation costs. For some reason, some hotels have not used solar or gas to produce electricity. First, Electric Du Cambodge (EDC) supplied electricity fully as the energy was sufficient to meet the needs of hotel operations. Second, it has been observed that all hotels have sufficient reserves to fully supply the hotels, and electricity engines would be used to generate electricity when hotel blackouts occur. Hoteliers were not aware of economic and environmental benefits. No space or roof was available for solar installation. Some hotels have designed the top floors of hotel buildings for another purpose, in particular for the sky-bar. Moreover, in rainy seasons, the sun could not supply solar energy to generate energy for hotels.

Electricity device timers were installed to manage the usage of energy in hotels. Those electricity devices included television, air-conditioners, and light bulbs which were set in open spaces in hotel buildings and gardening spaces. Lightbulbs of some hotels at open spaces were turned off automatically when it was around 6 or 7 AM and automatically turned on when it was 5.30 PM. It has been seen in large hotels that they have tried to set the system to replace human work. The hotels, the systems of which have not been set in hotels, have tried using humans/people to manage energy usage. For instance, around 6 or 7 AM, one staff switched off bulbs and switched on when it was around 6 PM.

Door key cards have been seen in many interviewed hotels. The door key cards were directly linked with energy to supply all energy devices in hotels except refrigerators. The refrigerators were not linked with key-cards directly as products of some hotel guests could be frozen in refrigerators and some drinks have been stored in refrigerators for guests for additional fee charges if the guests need the freeze drinks. Switching off refrigerators could rotten or damage products frozen by guests. Door key cards were required to take off when guests were outside hotel rooms. Motives for using door key cards were that hotel managers could not talk to hotel guests directly because they have



charged hotel room fees from guests and they were concerned that many complaints were from guests. Additionally, direct recommendations for guests could have negative impacts on hotel guests' feel. Hotel managers have recommended that door key card usage could reduce energy usage and reduce the costs of hotel operation. Some hotels were very strict on switching off door key cards. Hotel guests were required to take off door key cards while they were out of hotel rooms. Some hotels fined guests money when the guests brought door key cards with them when they were out of hotel rooms. The in-depth interview with a manager of a hotel in Phnom Penh indicated that

"The hotel, which I am working for, has used door key cards. When guests do the check-in, each of the guests is offered door key cards to open the door, switch it on and off. In my hotel rule, guests need to keep key cards with them when they are out of hotel rooms. They could not keep the key card in door key slots when they are out of the hotel rooms. If guests do not comply with this rule, they are fined around 30 to 50 dollars. My hotel does not need the fine money from guests and the important thing is that hoteliers want hotel guests to comply with hotel rules."

Double glass at hotel windows: Glass was seen to be attached to hotel windows. To reduce heat from sunlight, double-layer glasses were seen at the windows of some hotels. While some hotels were attached with only one layer of glass, those windows were also decorated with curtains that reduce heat from sunlight during strong sunlight time. Curtains were closed during the strong sunlight that heats hotel rooms. But those curtains were opened so that sunlight could penetrate the room without turning the light on. This approach can also save energy.

A young lady, who is the owner of a hotel in Phnom Penh, has confirmed that "my hotel has been recently established for two years. Hotel windows have been equipped with double glasses and curtains as they can reduce the heat of sunlight from outside and prevent noise from outside from getting into the rooms that disturb the guests who are staying in hotels. Additionally, hotel guests are also interested in glass windows as they can see the view of Phnom Penh and the Tole Barsac River. In the daytime, it has been observed that some hotel guests have opened curtains to see the view of the river.

Hotel guests were encouraged to save energy in hotels. Hotels have tried installing the system to control water use and save water rather than recommending or talking to guests to save water. For example, key card slots were set on doors. When guests are out, lights and all electrical devices are off automatically. Some foreign guests have



participated actively in saving electricity in hotels, in particular the foreign guests from Europe. Foreign visitors' understanding of the environment was instilled in them from a young age, which may have influenced their good performance in energy conservation. But some foreign guests have ignored electricity savings. Such performances by the guests have been observed to have happened for the Chinese. Cambodian guests preferred cold temperatures in their rooms. When the guests were in hotel rooms, they tried to adjust the temperature to around 160 °C (220 °C).

More hotels have considered using signs to inform guests about saving energy. Many signs have been designed and are available in hotels to encourage guests to contribute to reducing energy consumption. Some hotels have created signs with a few messages and placed them in guestrooms, bathrooms, and other public areas to encourage guests to participate in energy conservation. Some hotels have designed with some messages that "if hotel guests don't want towels in their rooms to be changed, the towels in hotels are requested to hang in bathrooms. If the towels were hung in the bathroom, they would be changed for guests. Some hotels have "No Disturb" and "Disturb" signs in each of their rooms. If guests don't want their rooms and the materials in them to be changed, they can hang "No Disturb" on the door.

In a hotel in Siem Reap province "Your contribution to the environment. Kindly turn off the faucets or lights, when not in use. Your simple gesture will help to preserve our green environment and financially to save energy in use. Thanks for your cooperation and enjoy the stay with us."

#### **b. Water Management**

The interviewed hotels have applied green to save water use in their hotels (average score of 3.32). Training on saving water for staff: the majority of sampled hotels have confirmed that new staff has been oriented and instructed to save water so that they have partaken in saving water. Additionally, to save water in hotel operations, water usage in the hotel was deliberated on in the hotels' weekly and monthly meetings. Hotel managers have confirmed that the instruction of water-saving for staff could lead to water reduction and contribute to cost reduction in hotels.

Water has been saved in hotels through lower water usage in toilets: almost all of the sampled hotels have used energy-efficient toilets that use less water "about 1.5 liters at



once". Such a decision has been made as energy-efficient devices use fewer resources. The new toilet model may also be 30% more expensive than the previous model. The reduction in water could lead to a hotel cost reduction. When the cost of hotels is reduced, hotel room fees could be priced lower. The hotel, therefore, could compete with other hotels in the provinces or cities. The toilets' lifecycle was so long that enabling hotel owners/managers was not so difficult to change. The company's staff or middle sellers who were material or equipment suppliers in the province have helped explain the benefits in terms of economics and environmental benefits. Company actors and middle sellers were also factors influencing the decision-making of hotel managers and owners through companies' staff explanations.

A respondent in Phnom Penh has confirmed that "in my hotel, I have saved about 30% through the usage of water-efficient toilets when I compare it with the use of the previous version of toilets. All of the toilets have been changed to new versions that can save water. It saves about 1.5 liters per time, while the previous one needed more than three liters per time. "

Water-saving sink aerators in hotels: The lifecycle of the water showers was so short that hotel managers and owners easily updated the new version of the showers that could save water for hotels. Furthermore, the affordable price of these showers has enabled hoteliers to change them as needed. Similar to the variables above, electricity company staff or middle sellers have contributed to lobbying hoteliers to consider new versions of showers. Furthermore, water has become a greater concern for hoteliers in some provinces where hotels must take care of water conservation measures, such as Preah Sihanouk province. In this year 2019, Preah Sihanouk Provincial Administration has an alarming water shortage. This water issue has become the main agenda of those hotels. In some hotels with large spaces, a few water pumping wells have been constructed to generate additional water to supply water for their hotels as the water from the water authorities could not supply all the hotel's needs. For those hotels that didn't have space for digging wells, they bought water from local small-scale water suppliers. The price of the water was cheaper from the water authorities than from local small-scale water suppliers. But a few hotels have not updated the showers as they did not want to add the cost of buying the new ones. They didn't have any concerns about the scarcity of natural water as in their provinces or locations, water could be supplied



as needed in hotels like Kratie province and Phnom Penh, where the Mekong River passes through, and Battambang province.

Signs and letters to encourage guests to save water were available in some hotels to encourage guests to reduce water usage. Some signs have been observed in hotels, including "Water is important for life", "Not Disturb or Disturb." Some guests have selected "No Disturb" to hang on the door, and this means that all materials (pillows, blankets, etc.) have not been changed for them. Such a way has also contributed to the water usage in hotels.

Most hotels do not recycle the used water in their hotels. The water treatment facility was so expensive that some hotels could not afford it. Second, it was an additional cost to buy water recycling facilities. Third, water was still available in target provinces. Those factors could influence the hesitation of hotel owners or managers to consider water reuse. Water was discharged directly into the public sewage pipe system. The majority of the hotels that had swimming pools reused water several times with treatment so that the water quality could not harm people's health, children's health, etc.

Some hotels have confirmed that the hotel guests who have stayed in their hotels have participated in water reduction initiatives, while most hotels have confirmed that the guests who have stayed in the hotels have not participated in water-saving initiatives. The hotel guests who participated in the water reduction did so because some signs have been put up in guestrooms to keep informing the hotel guests and alerting guests to reduce water usage. Some guests have contributed to saving water. Bath towels, pillows, and carpets in hotel guestrooms have not been requested to be changed during their period of staying in hotels. That approach could lead to a reduction in water use in hotels as they wouldn't need to wash it daily. Such practice has also led to a reduction in shampoo usage.

Rainwater container: rainwater has not been considered in hotels yet. Of the sampled hotels, only a few had rain containers, while most of the interviewed hotels didn't have them. Some reasons why rainwater has not been considered in hotels Natural water availability in some provinces could be a factor that rainwater has not been considered as important in hotels. For example, in Kratie province, the Mekong River could supply freshwater for hotels all year-round under the control of water supply authorities. Another factor that made hotels appear hesitant to care about storing rainwater to supply



their needs was the additional cost for rain stores and setting up the system to absorb rainwater.

Only a few hotels have considered the importance of rainwater supply for their operations. Those hotels were mostly in Preah Sihanouk province because they have experienced water shortages. The water supplied by the water supply authorities was not enough for hotel needs in the whole province. The air and water temperature changes could negatively impact water availability and quality. The longer period of heat may lead to higher water demands for domestic and industrial uses, and an increase in temperature may cause a reduction in surface water availability (Provincial Water Supply & Sanitation Project, 2017). The rainwater storage has been observed only in some large space hotels.

A hotel manager in Preah Sihanouk province indicated that "freshwater supplied by water supply authorities could not supply all the needs of my hotel." To get more water to supply my hotel, rainwater is also important. To get rainwater, I have constructed a rain container with a two-meter depth, a three-meter width, and a four-meter length. I could store water for 24 cubic meters once during the rainy season. Rainwater has not been used for hotel rooms. But the rainwater has been used for cooking in restaurants or watering flowers or gardens.

### **c. Waste Management in Hotels**

Almost all hotels had solid waste bins. Some factors have encouraged hotels to set up rubbish bins. First, the rubbish bins were so cheap that they could afford to buy them. Second, waste management in hotels and the tourism industry has been encouraged and pushed by ministries like the Ministry of Tourism and the Ministry of Environment. Third, hotel managers/owners felt that when hotel waste was well managed, it didn't have an impact on hotel guests' health. Fourth, waste was not well managed, and it also harmed the number of guests who came to stay in their hotels. Finally, hotel managers or owners wanted to store solid waste properly so it could not impact others. Bins were used for solid waste based on the types of solid waste.

One hotel manager in Phnom Penh indicated that "there are five trash bins to store different types of trash. One bin is for storing plastics, another bin is for storing bottles, one bin is used to store papers, another one is for keeping hazardous waste, and another



one is used to store kitchen waste. The script/messages are on each of the bins so that guests and hotel staff can keep waste in the bins properly.

A few hotels have also complained that they had trash bins but did not sort the waste from hotels based on the different bins as the trash collection companies have put together, even though the trash was kept in different containers.

A foreigner, who is the owner of one hotel in Phnom Penh, mentioned that “previously, I sorted types of waste and kept them in different bins so that the waste could be processed easily. But all the sorted waste in different bins in hotels has been put in one waste collection truck by the trash collection companies. I think it is useless to classify the waste into different bins. It would be good if the Royal Government of Cambodia had systematic ways to encourage green practice in hotels. RGC should push all stakeholders to manage waste. For example, RGC can work with waste collection companies to sort waste. Moreover, RGC has incentives to attract investors to create a business to process waste discharged from industries, including hotels.”

Sampled hotels, in particular in Preah Sihanouk, have complained to the trash collection company about the irregular collection of trash, and this also affects the feelings of guests as the bad smell comes from the waste which has been stored in front of the hotels for days.

A respondent in Preah Sihanouk province has complained that “it is hard to manage hotel waste properly. My colleagues have stored rubbish in different bins. The existing bins could not be stored for more than three days. When the hotel waste bins were full, my colleagues took them to a location outside my hotel yard. The waste collection company collects the waste once every five days and sometimes once a week. There is not sufficient space to store waste for five days or a week. The front of my hotel is full of waste. The wastes that are kept for five days or more than that period badly smell, and this bad smell harms hotels' guests. Daily, hotel guests in my hotel have complained about untidy waste and foul odors from the waste. But it is over capacity for hotel management. I have complained about this issue several times to the waste collection company, but no solution has been found and no action has been taken.”

Water treatment: most of the sampled hotels do not treat used water. The main challenge with this application was the high cost of the water treatment facility. Most of the used water from the hotels has been discharged directly into public sewage pipe systems without treatment. The water of the hotels that have swimming pools has been



treated and reused to reduce water use quantity. Only a few hotels that were near the sea were required to set up facilities to treat water before discharging it to the sea. Some hotels have just got instructions from the Ministry of Environment to set up water treatment facilities to treat wastewater. There would be additional costs for hotels to set up the water treatment facility. Some hotels have complained about water treatment facilities as they already have a water treatment facility to treat water that had been set up before, but recently, it has been directed by the Ministry of Environment (MoE) that hotel water treatment facilities have not met the requirements of the MoE. Besides the responsibilities of hotels in treating wastewater before discharging it to the ocean and rivers, the Royal Government of Cambodia (RGC) has constructed four facilities in Preah Sihanouk province to treat wastewater before releasing it to the sea and rivers in Preah Sihanouk province. The project was located at Independence, Sokha, O'Sa'at, and Ochheuteal beaches (Savi, 2019).

Preah Sihanouk, whose hotel is located near the sea, said that “in my hotel, a water treatment facility has been set up before with technical assistance from an engineer from Russia, but it has recently been confirmed by the Ministry of Environment that the water treatment facility of my hotel has not met the technical requirements of the ministry. I need to demolish the old one and I have constructed new ones at a cost of around thirty thousand dollars.”

Leftover food turns into organic fertilizer: The waste food of all sampled hotels has not been processed into organic fertilizer. The leftover food from kitchens has been kept in a container and has been managed in different ways. Leftover food has been kept in containers and all the leftover food has been collected by rubbish collection companies to transport for keeping in assigned places in the researched provinces. Second, for some hotels, hotel managers have connected with pig-raisers, and kitchen waste has been sold to the pig-raisers. Another type of remaining food was that some leftover food had been taken and delivered to organizations for orphans. But it made sure that all the food quality was still good and that it could be eaten without negative impacts on children's health. Food does not negatively affect orphan health.

A respondent, who is the manager of a hotel in Phnom Penh, said that “the food in my hotel is a buffet. My hotel guests enjoy Asian and European cuisines that are produced and made to serve them. But mostly, the food is European, as most of my hotel guests are foreigners. My hotel serves three types of food for hotel guests: breakfast, lunch, and



dinner. The remaining food from my hotel guests is not thrown away. We have given the remaining food to the orphan organization to feed orphans, but the quality of that food was still good.”

The recycling and reuse of discarded solid objects: The solid objects in most of the sampled hotels have not been recycled and reused. The objects have been kept in bins and those objects have been collected by rubbish companies. CENTRI Company has provided waste collection in 96 Sangkat in 12 Khan in Phnom Penh municipality. The company has offered garbage bins in public places and markets. It has been observed that very few hotels have reused bottles to package water. For all of the sampled hotels, kitchen keepers have been assigned to separate plastic bottles from other waste, and those bottles have been sold to waste gatherers. The revenue from those was delivered to housekeepers or the income was used to organize joint parties for kitchen teams. The income from bottles sold was differently managed. Some constraints on solid recycling or reusing were because the recycling facilities were expensive. The hotels do not have experience with waste recycling. There was a lack of connection between hotels and companies that had expertise in solid recycling and object cycling.

A respondent in Phnom Penh has confirmed that “the owner of the hotel has another company to produce or make pure water. All the water bottles in my hotels have collected around 50-80 plastic bottles every day. Those bottles from hotels have been reused in pure water enterprises to store water. This could reduce the discharge of plastics into the environment, and such performance can reduce the cost of buying bottles of pure water.”

Classification of solid waste in various bins: hotel guests and hotel staff classified the types of waste and kept those wastes in various bins. of bins were available in hotels, including bins for storing kitchen wastes, hazardous wastes, plastic wastes, bottle wastes, and glass wastes. However, it has been observed that some hotels have not sorted waste types and have not separated waste into different types of bins. The hotel managers thought that the wastes generated by hotels did not need to be separated, as when rubbish collection companies collected rubbish, hotel wastes had not been classified by the types of hotel wastes. It was useless when waste was separated while those types of rubbish were classified by hotels.

Recycling papers and reusing papers: all of the sampled hotels have confirmed that used papers have been re-used to reduce their impact on the environment. Reusing the papers



did not require high skill. Additionally, the reuse of the paper could contribute to a cost reduction.

An in-depth interview with a lady manager in Phnom Penh indicates that “I have printed papers. If one side of the paper is still available, I will reprint it or use it on another side. Two reasons for such practices are that they can reduce the cost of buying new papers and they can reduce the disposal of the papers into the environment. Such an approach is a contribution to reducing the impact on the environment.”

**Waste sorting:** Almost half of the hotels have classified their hotel wastes, and waste sorting programs have been instructed and discussed in monthly or weekly meetings. The instruction of this program for staff could encourage them to participate in preparing wastes and separating wastes into bins based on the types of wastes generated by hotels.

**The reduction in the usage of laundry detergents:** Some hotels have started using "No Disturb" for guests. When hotel guests didn't want to change pillows, towels, etc., the guests needed to hang signs saying "No Disturb" on the doors. Figure 4.9 confirmed that half of the guests, in particular the foreign guests from Europe, had not allowed hotels to change any towels, etc., as they took care of the environment. But some hotels have confirmed that they didn't want to use this sign "Do Not Disturb" as some hotel guests have not been permitted by hotels to change towels, etc. for a long time. Without washing all hotel items, such as towels, they may become soiled.

#### **d. Air Quality Management**

**Smoking and non-smoking areas:** A sign "No Smoking" has been posted on hotel rooms or guest room walls. A "no smoking" area has been reserved for hotel guests. Some areas of most of the sampled hotels, like verandas and outside hotels, have been permitted to smoke, while smoking inside hotels, including in guestrooms, has been strictly forbidden by hotels. Some hotels have assigned and divided smoking areas and non-smoking areas by floors. Hotel guests have been checked by hotel receptionists in advance. If hotel guests wanted to smoke cigarettes, they were arranged to stay in the rooms on the smoking floors. If those guests didn't smoke, they were arranged to stay on free smoking floors. Some hotels were strictly for smoking. Guests who smoked in prohibited areas would be fined.



A manager of a hotel in Phnom Penh said that "in my hotels, I have reserved the rooms on floors 5 to 7 for guests who want to smoke cigarettes. My colleagues have checked with hotel guests in advance whether they smoke or not. If hotel guests intend to smoke, they are offered to stay in the rooms on the smoking floors. If guests smoke cigarettes in prohibited areas, they are fined around \$100. It is stated in my policy.

All equipment in hotels was checked regularly. The first type was that staff had been assigned to be responsible for equipment control. In large hotels, one staff member or team has been assigned to be responsible for green practice in hotels. Second, for small hotels, the roles of controlling and checking equipment have been integrated into existing staff. The third type was that hotels collaborated with other companies to control and maintain equipment. If something was wrong, the hotel colleagues contacted other companies to check. For the third type, no specific people have been assigned. No one who regularly controls hotel equipment has been assigned to control hotel electric equipment. When they had electricity device problems, they contacted the company for technical support soon.

Many of the sampled hotels have used the facilities to absorb indoor air. They have not been installed at hotels to absorb polluted air from outside, while fans have been observed to be set up at some of the sampled hotels. Some of the reasons why they are used are to absorb poor quality air from the inside of hotels and vent it to the outside. The facilities and fans were not expensive, and hoteliers could afford to buy and set up in hotels. Moreover, fans could help absorb polluted air from hotel rooms and hotels' outdoor spaces. It is the need of hotel guests. It could be complained about by hotel guests if the facilities to absorb indoor air outdoors were not set up and the air quality in guestrooms was poor.

Green spaces in hotels: Green space is still a challenge for hotels to implement. Some challenges were identified. The first challenge was that there was no space for hotels to set green or decorate green. Second, some hotels had been set earlier and that was costly for the new redesign of the hotels. If new green hotel designs were created, the additional cost for new hotel designs would be required. The land space for rental was very high. If some spaces were reserved for green decoration, there would be additional costs. Even though space is limited, hotels have tried decorating green (planting flowers) inside hotel buildings and alongside hotel gates to have green in hotels.



An in-depth interview with one manager of a hotel in Phnom Penh revealed that "I have no space to decorate green in my hotel. I have tried embellishing green in my hotels. I have planted flowers alongside buildings and hotel gates. Flowers are ornate on desks.

Similar to the quotation above, another owner of a hotel in Phnom Penh has told researchers, "I have planted flowers alongside the front gates of my hotel. All the hotel gates were covered with flowers and green leaves. I like this style as it is also attractive to guests, in particular foreigners. Growing plants can reduce the heat from sunlight. I have also set up some small plants around swimming pools.

The hotels, which were located far away from provincial towns and municipalities, had spaces to beautify and design green to attract guests to stay in their hotels. To increase the green in hotels, hotel staff have tried planting trees, flowers, bamboo, grass, and palm trees.

A respondent in Siem Reap province, whose hotel was located about two kilometers from the provincial town center, said, "I don't have any barriers with space for green. A large space is available in my hotel. I have planted some green plants. Some spaces have been planted with grass, while some spaces have been planted with palm trees. Some spaces have been planted with small trees."

Another hotel manager in Siem Reap said that "there are five hectares for my hotel yard. Small roads have been constructed. Along the paths inside my hotel yards, there are hotel buildings. Many types of trees, palm trees, and flowers have been planted around the building to make it greener and better for the environment. The buildings have been constructed mostly from wood and partly from concrete. Guests are interested in this model of a green environment.

Hotel structures are typically made of brick and concrete. Hotel managers and owners have designed those buildings to reduce energy usage in different models. Some types of green building models were identified: some hotel buildings have been set with glass into windows, walls, and roofs. New hotels have noticed that their buildings have been set up with glass downstairs, windows, and rooms. Some reasons for this initiative were the knowledge of hotel owners, energy reduction, and cost reduction. The hotels have been started for years, with fewer invitations on the green. Some spaces in buildings have been decorated with bamboo to make them more attractive. Some buildings have been made of wood and concrete. Wood is regarded as a renewable natural resource.



My hotel owner has visited abroad many times, and he has learned green building designs that use less energy from his visits. Additionally, he has expertise in engineering designs. He has also designed buildings with many parts of windows, walls, rooms, and other spaces covered with glass. Setting glass as windows could contribute to energy savings and cost savings for hotel operations.

#### **4.2.3. Promoting Green Product and Local Economic Development**

##### **a. Green Product Uses in Hotels**

Domestic quality meat: Most hotels do not guarantee that the meat used in their food has been produced by local farmers. Most vegetables are bought from local markets in provincial towns and cities. Most hotels have confirmed that some meats have not been confirmed that meats have been produced locally. It has been assumed that some local meat has been imported from outside as local producers/farmers could not produce year-round for hotel needs. Some of the meats in the local meat market in Kratie province have been produced locally and some have been imported from Vietnam. Some meat has been imported from Thailand, and some meat has been produced and supplied by middle sellers who have collected or bought it from farmers or local producers. In some of the hotels in Phnom Penh, meat has been supplied by middle sellers (Phsar Doem Kor market, Phsar Chass, Phsa Thmei market)... For hotels that market to foreign guests, the meats for foreign food have contracted with a company to supply the meat.

A respondent in Phnom Penh has stated, "I have cared about the guests of my hotel. I have contracted with one company to supply Australian beef for my hotel restaurant. But the price of organic products is double the price of local market products. Certified meat can be guaranteed for people's health."

Some hotels that were far from the Phnom Penh municipality found it hard to ensure that their products were organic or not. No source of organic products has been identified in the provinces. As mentioned in the legal analysis of green products, no standard of meat quality has been certified by RGC. The law was still in draft.

A manager of a hotel in Kratie province declared, "I have bought meats like fish, beef, and pork from Kratie market, and I could not guarantee whether all the meats were produced by local farmers or not. Another thing is that even though meat is produced by local farmers, it is not guaranteed whether it is quality meat or not. It is hard for me to



look for quality meat. My colleague has a relationship with meat sellers, and the meat sellers have delivered meat to the hotel. Meat from Kratie market, such as pork, beef, and fish. I have observed that some meats have been imported from Vietnam, like fish and chickens.

The usage of certified organic vegetables in hotels: Eighty-one percent of the interviewed hotels had restaurants to serve food to guests. The type of food was based on the target guests. Local vegetables have been used for making food in the hotels that served Asian guests. The vegetables from the local markets have been used. No organic vegetables were guaranteed. The hotels have targeted foreign guests. The hotels have bought vegetables from super supermarkets, in particular in Phnom Penh. But all those vegetables were not guaranteed to be organic vegetables or not. Some challenges to using organic vegetables were identified. First, the high price of organic vegetables was one barrier. The price of organic vegetables was high in comparison with the price of non-organic vegetables. Another barrier was that there was no association or system to control vegetables to make sure whether all vegetables supplied were organic or not. The third barrier was that local farmers could not supply vegetables for the whole year, particularly in the dry season. Farmers prefer growing plants in the rainy seasons as they do not need to water vegetables. Due to water challenges and shortages in dry seasons, farmers could not supply hotels for the whole year.

A manager of hotels in Koh Kong province has shared their difficulties in looking for organic vegetables for hotels. The vegetables for my hotels are from the market in Koh Kong, a provincial town. Those vegetables are from other countries like Thailand and Vietnam. I am concerned that all those vegetables are not organic. Moreover, no agency could certify whether vegetables are organic vegetables or not. Only foreigners eat in hotels where all meat and vegetables are bought from supermarkets in Phnom Penh. "

Few hotels have purchased local products from rural communities to sell in their establishments. They wanted to contribute to the promotion of local products, and they have earned some income from those product sales to their hotel guests.

An in-depth interview with the respondent, the manager of a hotel in Kratie province, confirmed that "I have purchased wooden-made souvenirs produced by community members in Kampi ecotourism, and those products have been displayed and sold in my hotel." It can help contribute to income for rural communities."



A manager of a hotel in Phnom Penh said, "My hotel just started only one year ago. Regarding the Corporate Social Responsibility (CSR) project, I have one project to support and promote local community products. I have processed cashew nuts and packaged cashew nuts as final products. Cashew nuts have been bought from rural communities, and those cashew nuts have been sold in my hotels. It was projected that 30% of the profits would be used to help poor communities.

Most of the hotels have reported that they have not promoted local products, so they could not support the incomes of local communities. They have only used the products to decorate their hotels to make sure the hotel appearances are more attractive to guests. The local products from communities have not sold well, and only a few products could be sold. It was difficult for them to invest the proceeds from community product sales in hotels.

An interview with a respondent in Preah Sihanouk province indicated that "earlier, I bought community products which were made of seashells and sold in my hotels. But those products are hard to sell. Those products include flowers made of seashells, but those products could not be sold and no one was interested in buying them. Guests have bought it from tourism sites rather than from hotels.

#### **b. Green Incentives in Hotels**

Many hotels have failed to consider their employees' green knowledge when recruiting and hiring. Education and work experience gained from working with hotels rather than green knowledge were important for the decision-making of the recruitment committee and hotel committee. Second, the experience of working with hotels has been prioritized in hotels. No specific requirement for green knowledge from candidates was mentioned. Some sampled hotels have also collaborated with other agencies that have offered courses on hotel hospitality and cooking to recruits to work in hotels. The training courses that were delivered by agencies did not focus on the green concept in hotels. Besides profits, some hotels have programs to offer training courses on front desks but do not concentrate on green concepts in hotels. Hotels have approached organizations on occasion to nominate some candidates for interviews by recruitment panels. Generally, green knowledge has not been considered as a criterion for staff recruitment.

One respondent in Kratie province has said, "When my hotel needs staff, I have approached non-government organizations (NGOs) to nominate some candidates who



have been trained by the NGOs to be interviewed." The interview panel has met with her/him to clarify her/his knowledge. The green concept was not included in staff recruitment criteria."

Green business knowledge people at management level: It was similar to the variables above that were mentioned about the inclusiveness of green knowledge in staff recruitment and selection, but green knowledge has not been considered in criteria to recruit for management roles or promote to become a management role in hotels. To recruit for management roles in hotels or promote to become management roles in hotels, experience in management roles in hotels, and an educational degree concerning hotels, hospitality and tourism were the main factors to be recruited to be in management roles.

Hotel employment of people with disabilities: Of 132 sampled hotels, few have employed people with disabilities to work for the hotels. People with disabilities have been employed to work on kitchen tasks and low positions. For some reason, most of the sampled hotels do not employ people with disabilities to work in their hotels. The hotel managers/owners were not aware of the rights of people with disabilities. They have not had any inclusive policies to promote people with disabilities in hotels. The hotel managers/owners felt that people with disabilities could not perform the roles and responsibilities well. The last one was that there was a lack of connection between hotels and the organizations that focus on people with disabilities. Lack of connection on both sides has challenged hotels to access the information of people with disabilities (PWDs), and the PWDs have constrained access to information on job opportunities in hotels.

An in-depth interview with one respondent in Phnom Penh has shown that "there are no people with disabilities working at my hotel. We have not discriminated against them. But during selection, we have not received any applications from people with disabilities. The job announcement does not mention that people with disabilities are encouraged to apply."

The provision of business opportunities for local people: The available jobs with hotels were any direct employment with hotels. Jobs with hotels, in particular staff, have been offered to people from the provinces and rural areas. Approximately 60% of the workforce was drawn from the provinces and rural areas. At hotels in the target research



province, 50% of the hotel staff were from rural areas. Some staff were studying at universities, while some had already completed or graduated from universities.

One of the respondents in Phnom Penh capital mentioned that “my colleagues are from rural areas. Those staff come to Phnom Penh to study at universities. They are from Prey Veng, Kampong Cham, and Takeo provinces. For the rest of the time between studies at universities, they have worked here to generate money for their studies. Almost 50% of the staff in my hotels are women.”

The activities to improve the conditions of people living in very few hotels have few activities to improve the livelihoods of local people, but those activities are not directly income-generating. The challenges for fewer activities of rural community livelihood improvement were that the activities to support the livelihoods of rural people needed money or were costly. If hoteliers had designed such a project, hotels would increase their costs, which could lead to an increase in the fee for the stay services of the hotels. An increase in hotel room fees made it hard to compete with other hotels in the market. Lack of knowledge of corporate social responsibility was also a barrier. Only a few hotels have supported pumping wells for poor people who have faced water shortages in the dry season, and some hotels have supported school buildings for poor communities. But the majority of the activities contributed directly to income generation.

A manager of a hotel in Phnom Penh has confirmed that “there is a specific plan to construct three pumping wells for poor communities so that they have sufficient water for usage and fewer expenses for water. In 2019, three pumping wells have been planned to be constructed for poor communities. Now we are looking for poor communities to be supported. But the communities are not so far from Phnom Penh as we are very busy with hotel work and cannot overstay at the communities.”

According to all of the hotels, no hotel has produced a policy to recruit staff with knowledge of green concepts. Lack of policy was also a challenge for green business implementation, as was the lack of commitment of the management team and also a lack of procedure to make decisions.



#### **4.2.4. Environmental Promotion and Local Culture Promotion**

Most of the sampled hotels didn't have the activities to educate local communities on the environment. This was due to four reasons that no clear plan for environmental education has been developed. Second, no budget has been allocated for environmental education for local people. Third, lack of knowledge of the environment of staff in hotels was another barrier. Fourth, the additional cost was required to reserve some budget for education about the environment for local communities.

Hotel guests were encouraged to join in local traditional events and customs; the majority of the hotels did not have any activities to conserve and promote the cultures of rural people and communities. This was done for a reason. There was a lack of connection between hotels and local communities. The lack of hotels' plans to send guests to work with communities was another challenge. The guests of some of the interviewed hotels were not interested in doing those activities. There was a lack of coordination roles between hotels and local communities. It has been confirmed that 500 community-based organizations (CBOs) like community forestry, community fishery, eco-tourism, etc. have been created in Cambodia to promote and conserve natural resources like forests, fishery resources, etc. that help support the livelihoods of local people whose livelihood activities are closely linked with natural resources. If hotels commit to working with communities, they have just connected with those communities and proposed some actions to work with them. Very few hotels have confirmed that they have sent their guests to work with communities. They had their own strategies for working with communities. When guests booked hotels, they checked with the guests whether they were interested in working with communities or not. If guests were interested in that action to help and stayed in rural communities, they set a schedule to send guests to work in rural communities, like forest plantation campaigns. But mostly, the guests come to stay at hotels in the team's organizations or companies. They are interested in this kind of activity. If they come alone, the plan of working with communities rarely occurs.

Few hotels have collaborated with CSOs and have direct contact with communities. They have supported in-kind local communities. Some hotels have supported the construction of pumping wells for local communities that have faced water shortages. Some hotels have supported hotel food for orphan children, and some hotels have



donated scarves and towels to poor students from poor communities. Some hotels have supported the construction of buildings for poor communities. The hotel's materials, like towels, blankets, pillows, etc., have been donated to poor people. Some hotels have donated school kits for students in isolated communities.

#### **4.3. Effectiveness and Efficiency of Green Business Practices in Hotels**

This section aims to explore and analyze the effectiveness and efficiency of green business-standard implementation in hotels. Five variables representing the efficiency and effectiveness of hotel green business-standard implementation were identified. Those variables were (1) water reduction, (2) energy reduction, (3) cost reduction, (4) guest increase, and (5) profit increase. The mean of each of the five variables was computed to compare the effectiveness and efficiency of green business-standard implementation in hotels. Then regression was done to study the correlation "extent of hotel green business-standard implementation in hotels" as an independent variable, and five variables ("water reduction, energy reduction, cost reduction, guest increase, and profit increase") were the dependent variables.

##### **4.3.1. Score of Effectiveness and Efficiency of GBSI**

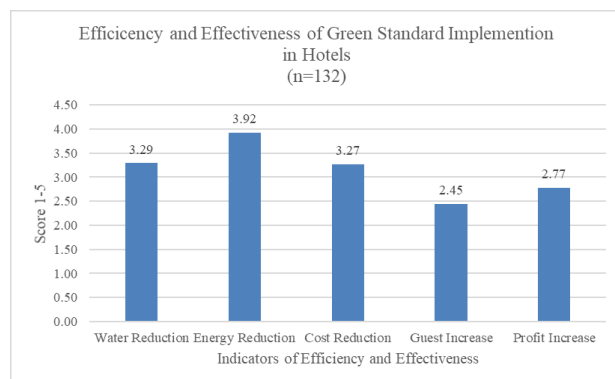
In this part, it analyses the efficiency and effectiveness of green business-standard implementation in hotels. The researcher has set five variables to measure the efficiency and effectiveness of green business-standard implementation in hotels. Five variables included water reduction, energy reduction, cost reduction, guest increase, and profit increase. Respondents have scored each of the five variables from "1" to "5". Number "1" represents the "Strong Disagree," while number "5" represents the "Strong Agree." The average score of those five variables is computed through a descriptive statistical tool.

Figure 4.1 indicated the score of the effectiveness and efficiency of green business-standard implementation in hotels. Five variables focused on (1). The first variable was that green business-standard implementation in my hotel has reduced water. The second variable was that the green business-standard implementation in my hotel has reduced energy use. The third variable was that the green business-standard implementation in my hotel has reduced the cost of hotel operation. The fourth variable was that green



business-standard implementation in my hotel has increased guests. The last variable was that green business-standard implementation in my hotel has increased profits.

Figure 4. 1: Score of efficiency and effectiveness of GBSI in hotels



Source: Developed by the researcher

**Water reduction:** water devices have been innovated and installed in hotels to reduce water usage in hotels. Water devices have been noticed; water-saved toilets have been used; water-shaved showers have been installed. Furthermore, water has been treated and reused, in particular in swimming pools in hotels, which could reduce water usage. Some guests, in particular European people, have participated in water usage reduction by not allowing hotels to change towels.

**Energy savings:** energy savings have occurred as a result of new initiatives for energy devices that have reduced energy usage in hotels. Key cards have been used. Energy-saving air-conditioners have been used. Solar panels have been used in some hotels to generate electricity to supply hotels or heat water. Some guests have also set their thermostats lower than 24 °C, so they can participate in reducing energy usage. Motion sensors have been set up at most of the sampled hotels. Solar power has been used in 50% of the hotels sampled. Most of the hotels being interviewed have been equipped with glass windows. Most of the sampled hotels have energy-saving air-conditioners. Few hotels have confirmed that hotel guests' participation in saving energy with temperatures below 24 °C was lower than average (neutral). Solar/gas used to heat water has been observed in a few hotels. Key slots have been seen in many sampled hotels.

The result of the in-depth interview with a respondent in Phnom Penh has mentioned that "I have set the glass on the hotel windows and balcony." On the ground floor, most parts



have been equipped with glass. In the daytime, I have never turned the lights on as sunlight penetrates indoor spaces on the ground floor. I can save energy by almost 30% with such a performance. "

**Hotel Cost Reduction:** The reduction of water and energy usage in hotels could mainly contribute to hotel cost reduction. Water and energy are the core problems that hotel owners or managers have faced because water and energy are related directly and affect the cost of the hotel's operation. Some energy devices which could save energy have been used and updated for use in hotels to reduce those resources' (water and energy) usage. Air-conditioners with inventions like freezing boxes that save energy have been used. In hotels, lamps and bulbs have been updated. Key slots have been used in hotels to disconnect electricity and all energy devices in hotels. Hotel windows have been set up with glass to get sunlight inside. Solar panels have been used to generate energy to reduce the environmental impact.

One respondent of a large hotel in Phnom Penh said that "air-conditioners in my hotels have used humidity in the air to run themselves, and the air-conditioners have absorbed natural air outdoors into the indoor space and rooms of the hotels. The air conditioner purifies natural air. The air conditioners are set to 24 degrees Celsius. Guests could not adjust their rooms up or down as they wanted. Such air-conditioners don't need energy. This can help preserve natural resources."

An increase in guests from hotel green implementation was scored with a point (score 2.47) that is located between "Disagree" and "Neutral." In each hotel, it was very hard to identify the number of guests coming to stay at the hotel again. But some hotels could confirm that among guests, about 30 to 70% have confirmed that the guests come to stay at their hotel again as a result of a combination of factors: good service, clean and green practice. Green practices could be used to increase guest loyalty in their hotels.

One of the respondents in Phnom Penh has said that "the majority of my hotels' guests are foreigners. Based on my observation, around 60–70% of the guests have come back to stay in my hotel. It is not a single factor that attracts guests to come and stay in my hotel. Many factors have encouraged and attracted guests to come and stay again. The good services, friendly communication of staff and guests, clean hotels and guest rooms, good location, and green practices have motivated guests to stay in the hotel again. I think green practice is also a part of guest attractiveness."



Respondents have agreed on the positive impact of green business-standard implementation in hotels on the profit increase of hotels with a score of "score 2.80." The green businesses directly reduced energy use and water usage. This could lead to a cost reduction. Cost reduction has led to an increase in the profits of hotels.

#### **4.3.2. Simple Regression of Hotel GBSI with Water, Electric, Waste Usages**

In this part, five hypotheses were tested with simple linear regression tools. The hypotheses are below.

- There is no significant prediction of "water reduction" by GBSI in hotels.
- There is no significant prediction of "energy reduction" by GBSI in hotels.
- There is no significant prediction of "cost reduction" by GBSI in hotels.
- There is no significant prediction of "guest increase" by GBSI in hotels.
- There is no significant prediction of "profit increase" by GBSI in hotels.

To test hypotheses 1, 2, 3, 4, and 5, simple linear regressions were used to test the association between hotel green business implementation degree (one independent variable) and each of the four dependent variables (water reduction, energy reduction, cost reduction, guest increase, and profit increase).

The first, simple linear regression model was to test hypothesis 1 to analyze the association of one independent variable (hotel green business implementation degree) and one dependent variable (water reduction). The second, simple linear regression, was used to test hypothesis 2 to analyze the correlation between one independent variable (the hotel's green business implementation degree) and the dependent variable (energy reduction).

The third, a simple linear regression model, was employed to test hypothesis 3 to analyze the correlation between one independent variable (green business implementation degree in hotels) and the dependent variable (cost reduction). The fourth simple linear regression model was proposed to analyze the correlation between one independent variable (green business implementation degree in the hotels) and the dependent variable (guest increase). The fifth simple linear regression model was proposed to analyze the correlation between one independent variable (the hotel's green business implementation degree) and the dependent variable (profit increase).



The output of testing hypothesis 1 in table 4.5 showed that the measure of explained variance was equal to 0.547, so 54.7% of the variation in "water reduction" could be explained by the variation in the extent of "green business-standard implementation in hotels." whereas 45.3% of the variation was unknown. The analysis of variance revealed that the F-value was 156.9, with an associated probability of 0.05. This means that "green business-standard practice in hotels" could significantly predict EE1 "water reduction" in hotels. The value of slope B was 0.823, which means that for every point of GBSI "green business-standard implementation in hotels" rose one unit, the score of EE1 "water reduction" increased by 0.823 units. The 95% confidence limits indicate that the population slope could be found between 0.693 and 0.953. The water reduction was because the staff had participated in water saving. They were trained in water-saving when they started working in hotels. Guests have participated in saving water. The signs to save water and conserve the environment have been set up in hotels. Towels have not been allowed to change due to the environmental impact reduction of guests. The facilities used in hotels have been innovated to save water. For example, the toilets needed less water (less than 2.5 liters). Aerators with strong spraying water have saved water usage. Used water has to be reused for a few hotels in the researched area. Those applications of water reuse included swing pool water. The water from the swimming pools of the majority of the hotels has been treated and reused.

The test of hypothesis 2 in table 4.5 showed that the measure of explained variance is 0.616, so 61.6% of the variation in EE2 "energy reduction" could be explained by the variation in the extent of GBSI "green business-standard implementation in hotels." Whereas, 38.4% of the variation was unknown. The analysis of variance showed that the F-value was 208.59 with an associated probability of 0.05. This means that green business-standard implementation could significantly predict EE2 energy reduction. The value of slope B was 1.123. This means that an increase of one unit in GBSI "green business implementation" led to an increase of 1.123 units in the score of EE2 "water reduction." The confidence limit at 95% confidence that population slope could be found within the interval of 0.969 and 1.277 is set. The energy consumption in hotels has been reduced because the staff have been trained in energy. Staff who have been recruited have been introduced to energy saving. The topics regarding the energy consumption of the hotels have been discussed regularly in meetings, and the best solution to reduce energy costs has been found. Energy-efficient devices have been



updated and installed in hotels, like bulbs, air-conditioners, etc. Many hotels have started using motion sensors in their hotels so that they can reduce energy usage. Some hotels have used solar power to generate energy to supply their needs. Glass has been set up at hotel windows and in some areas of the hotels. In the daytime, it didn't need to turn the lights on. This could save energy as well. Air-conditioners that save energy have been used in hotels. Some guests have participated in energy reduction programs in hotels. Door key cards in most hotels have been used in hotels. When guests were out of the room, the lights were off automatically.

The test of hypothesis 3 in table 4.5 indicated that the measure of explained variance was 0.558, so 55.8% of the variation in "cost reduction" could be explained by the variation in the extent of "green business implementation in hotels," whereas 44.2% of the variation was unknown. The F-value was 164, with an associated probability of 0.05. This means that green business-standard implementation can significantly predict EE3 "cost reduction." The value of slope B was 0.824, which means that the increase of one unit in the score of GBSI "green business-standard implementation" led to an increase of 0.824 units in the score of EE3 "water reduction". The 95% confidence limits indicate that the population slope could be found between 0.697 and 0.952.

The test of hypothesis 4 in table 4.5 illustrated that the measure of explained variance was 0.314, so 31.4% of the variation in "guest increase" could be explained by the variation in "the extent of hotel green business implementation," whereas 68.6% of the variation was unknown. The analysis of variance showed that the F-value was 59.5, with an associated probability of 0.05. This means that GBSI "green business-standard implementation" in hotels could significantly predict EE4 "guest increase." The value of slope B was 1.11. This means that an increase of one unit of GBSI "green business-standard implementation" led to a rise of 1.11 units in the score of EE4 "water reduction". The confidence limits indicate with 95% confidence that population slope can be found within the interval of 0.86 and 1.394. Some factors which could increase guests were that some guests were aware of environmental knowledge. Using green practices or environmental practices, together with a combination of other factors, could contribute to attracting guests to stay in hotels.

The test of hypothesis 5 in table 4.5 showed that the measure of explained variance was 0.525, so 52.5% of the variation in EE5 "profit increase" could be explained by the



variation in "the extent of hotel green business implementation," whereas 47.5% of the variation was unknown. The analysis of variance showed that the F-value was 145.575, with an associated probability of 0.05. This means that "green business-standard practice in hotels" could significantly predict "profit increase."

The value of slope B was 0.76, which means that the increase of one unit in the score of GBSI "green business-standard implementation" in hotels led to an increase of 0.77 units in the score of EE5 "profit increase." The 95% confidence limits indicate that the population slope could be found between 1.130 and 1.406. Some profit-increasing factors were due to a variety of factors. Hotel energy and energy reduction could reduce hotel costs. The cost of hotel operations was directly related to hotel profits.

Table 4. 5: Simple regression outputs for H1, H2, H3, H4, H5

Model	B	Std. Error	Beta	t	Sig.
Hypothesis 1: HGBSI and EE1 "water reduction" (R=.740a, R2=.547, F=156.914, P<0.05)					
(Constant)	.796	.204		3.897	.000
HGBSI	.823	.066	.740	12.527	.000
Hypothesis 2: HGBSI and EE2 "energy reduction" (R=.785a, R2=.616, F=208.588, P<0.05)					
(Constant)	.515	.242		2.131	.035
HGBSI	1.123	.078	.785	14.443	.000
Hypothesis 3: HGBSI and EE3 "cost reduction" (R=.747a, R2=.558F=164.008, P<0.05)					
(Constant)	.769	.200		3.845	.000
HGBSI	.824	.064	.747	12.807	.000
Hypothesis 4: HGBSI and EE4 "guest increase" (F=59.505, P<0.05, R=.560a, R2=.314)					
(Constant)	-.913	.447		-2.041	.043
HGBSI	1.110	.144	.560	7.714	.000
Hypothesis 5: HGBSI and EE6 "profit increase" (R=.727a, R2=.528, F=145.575, P<0.005)					
(Constant)	.446	.198		2.251	.026
HGBSI	.769	.064	.727	12.065	.000

Source: Developed by the researcher

#### 4.3.3. Amount of Water, Energy and Waste Usages in Hotels

Table 4.6 shows the descriptive statistical analysis used to analyze the average monthly quantity usage of water and energy in hotels. Table 4.6 illustrated that the monthly water usage average of 132 sampled hotels was 712.48 m<sup>3</sup> with a minimum water usage of 71 m<sup>3</sup> and maximum water usage of 5500 m<sup>3</sup> with a standard deviation of 693.78 m<sup>3</sup>



monthly. The quantity of water used in hotels depends on the number of rooms, swimming pools, and water devices as well as the number of guests staying in hotels.

Table 4.6 suggests that, of 132 sampled hotels, the monthly average electricity used in hotels was 2,346.59 kWh, with a minimum of 1,200.00 kWh and a maximum of 22,949.92 kWh. The standard deviation was high (22,949.92 kWh). The amount of electricity used in hotels was based on many factors: the number of rooms, types of electrical equipment, and the version of electrical devices. The number of hotel rooms ranged from 10 to 228 rooms. The more rooms there were in hotels, the more energy was needed as energy devices have been equipped in those hotel rooms. The electric devices were elevators, lightbulbs, televisions, and refrigerators. Some hotels that started many years ago used an old version of materials, in particular air-conditioners, with a high quantity of electricity usage.

Table 4. 6: Quantity of water usage in hotels per month

Water Use	N	Min	Max	Mean	Std. Deviation
Water Usage (m <sup>3</sup> )/ month	132	71.00	5500.00	712.48	693.78
Electricity Usage (KWh)/ Month	132	1,200.00	123,000.00	23,467.59	22,949.92

Source: Developed by the researcher

#### 4.3.4. Reduction of Water, Electric, Waste Usage from GBSI

In this part, three variables are identified: energy reduction (kWh) per month, water reduction (cubic meters) per month, and waste reuse (Kg) per month after Green Business Standard Implementation (GBSI) in hotels. The average quantity of energy, water, and waste reused was computed.

The averages of the quantity reduction of water, energy use, and reuse per month are shown in table 4.7. Table 4.7 shows that hoteliers have benefited from green business-standard implementation in hotels. Through energy device initiatives, hoteliers have saved an average of 2,090.59 kWh per month, with a minimum of 49 kWh and a maximum of 13,600 kWh, with the standard division of 2,432.27 kWh.

Additionally, hoteliers have saved water through "green business-standard implementation" in hotels. Table 4.6 showed that hoteliers could save an average of



86.13 cubic meters per month with a minimum of 6 m<sup>3</sup> and a maximum of 850 m<sup>3</sup> with a standard deviation of 120 cubic meters. Systems and human activities have contributed to the reduction of water in hotels. Two factors have been observed to affect the quantity of water consumed in hotels. First, water-saving devices and human activities have contributed to a reduction in water consumption in hotels. The water devices included toilets, showers, swimming pools, etc. Hoteliers have tried having incentives to buy new versions of water devices to reduce the amount of water used in hotels. Second, staff and guest performance toward environmental impact reduction could contribute to lessening water use in hotels.

Solid waste, in particular water bottles, has been separated by housekeepers. This means that bottles have been recycled by other companies to create other things or products. At least those quantities of plastic bottles have not been disposed of and have not impacted the environment. Table 4.7 showed that the average number of bottles per month per hotel has been separated from others and sold to rubbish collectors for recycling. The minimum number of bottles sold was three kilograms per hotel, while the maximum amount of bottles sold was 1,500 kilograms per hotel per month with a standard deviation of 63.78 kilograms.

Table 4. 7: Reduction of energy and water from hotel GBSI

<b>Effectiveness and Efficiency</b>	<b>N</b>	<b>Min</b>	<b>Max</b>	<b>Mean</b>	<b>Std. Deviation</b>
Energy Reduction (KWh) per month	132	49.00	13600.00	2090.59	2432.27
Water Reduction (m <sup>3</sup> ) per month	132	6.00	850.00	86.13	120.30
Waste reuse (Kg) per month	132	3.00	1500.00	63.78	156.82

Source: Developed by the researcher

#### **4.4. Influencing Factors on GBSI in Hotels**

This section analyses the factors influencing GBSI in hotels to address research objective 3: "To identify the influencing factors on green business-standard implementation in hotels." This section consists of five parts: customers' support, government regulations, perceived benefits, managers' attitudes, and staff's support (as mentioned in 4.4.1, 4.4.2, 4.4.3, 4.4.4, and 4.4.5).



#### 4.4.1. Customers' Supports and GBSI in Hotels

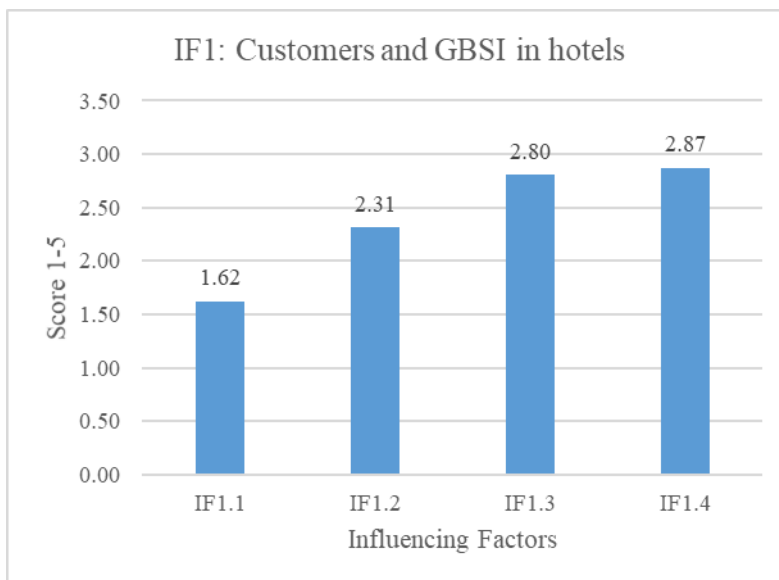
This part examines "customers' support for GBSI in hotels." This section comprises two parts: the average scores of customers' support for implementing GBS in hotels and the regression of customers' support for GBSI in hotels.

##### 4.4.1.1. Average Scores of Customers' Support Factors

The average scores of the customers' support affected the Green Business Standard Implementation (GBSI) in hotels. Four variables were developed so that the respondents scored from 1 to 5. The number "1" represents "Strongly Disagree" and "5" represents "Strongly Agree."

Figure 4.1 shows the average score of the influencing factor (IF) of customers' support for green business-standard implementation (GBSI) in hotels. Four influencing factors were analyzed in this figure. Those influencing factors were that IF1.1, "Customers' willingness to pay extra for green practice has encouraged hotels' owners/managers to apply the green practice," IF1.2 "Customers' knowledge for green application in hotels" and IF1.4 "Customers' loyalty has encouraged to practice green in hotels," on green growth has encouraged to apply green in hotels," and IF1.3 "Customers' knowledge has motivated hotel owners or managers to apply green practices in hotels."

Figure 4. 1: Customers and GBSI in Hotels (IF1)



Source: developed by author



The average computation in figure 4.1 indicated that four variables were scored at a low level. IF1.1 "The willingness of guests to pay extra for hotel green practices" was rated very low between "Strongly Disagree" and "Disagree", while IF1.2 "customers' knowledge of green growth", IF1.3 "guests' knowledge of green tourism" and IF1.4 "customers' loyalties" were rated at a low level between "Disagree" and "Neutral".

IF1 "Customers willing to pay extra money for green hotels" was scored very low (score 1.62), which is located between "Strong Disagree" and "Disagree". This means that few customers were willing to pay extra money for green practices in the hotels they stayed in. Another explanation was that IF1, "willingness of customers to pay extra for green practices," was less influential on the decision-making of hotel owners and managers to absorb green business standards in hotels. Because the green innovations and initiatives in hotels need additional costs, hotel guests should be engaged in contributing to green practice.

For whatever reason, the factors discouraging hotel guests from contributing some money to green were hotel guests' knowledge of the green concept was limited, and hotel guests have less understanding of the green concept, which has made them hesitate to pay extra money for green business implementation in hotels. Raising awareness of the green concept and implementation was important, and the first step should be started before charging an additional fee for green business implementation in hotels. The hotels in Cambodia seemed to vacillate about discussing and requesting guests to consider additional contribution fees for green practices in their hotels, as they were worried that guests would not stay and return to stay in their hotels if they charged doubles.

The result of an in-depth interview with a respondent who was a manager of the hotel that targets Cambodians is that "I am not sure exactly how much money guests could pay extra for hotel green business implementation." But I think that it is very hard to request them to charge an additional fee. If we charge them more money, I am concerned they may decide not to stay more and move to stay in other hotels. If we want to charge an additional fee for green practices in hotels, it should take more time to make sure that the majority of the hotel guests are aware of the value and importance of green business standards and the importance of environmental conservation."



Hotels in which audiences were of different nationalities and groups had different perspectives on fee charges for green business implementation.

Another respondent of the hotel, the audience of which is Chinese, has explained the concerns about additional fee charges for green business practice in hotels: "Chinese people who come to stay at my hotel seem not to care about environmental impacts and green practice." Even though signs "not smoking" have been placed on tables and walls of the hotels, they have tried to smoke everywhere in the hotels. For such a performance, I think that those guests will not pay further money for green practice in a hotel."

Only a few hotels have confirmed that some of their groups might be able to afford the fee for green business-standard implementation. It has been observed that the audience of the hotels were foreigners like the Japanese, or people from Europe, who were aware of their environmental importance since they were young, and the knowledge of environmental values has been mainstreamed for them since primary schools.

A result of an in-depth interview with a respondent from a hotel, the audience of which was Japanese, was that "I think some guests who have valued the importance of the environment can pay some money for green business implementation in a hotel, and I think they could pay around three dollars." Most of my hotel guests are aware of the environment and they usually care for the environment in the hotel. They have contributed more to saving water and energy in hotels. When they stayed, they helped keep waste in the proper place in the bins. Moreover, they sometimes turned off energy devices in hotels, like lights, and they opened window curtains.

As shown in figure 4.1, IF1.2 "Hotel customers' knowledge of green growth" was ranked with a score of 2.31. To promote green business in hotels in Cambodia, strategies, policies, and frameworks have been developed to direct and guide businessmen and stakeholders to apply green in hotels. Hotel guest power was also a factor that could influence a green business application in hotels. The score for "hotel customer knowledge" is between "disagree" and "neutral". This score can be explained by the fact that hotel customers have less knowledge of green growth. The limitation of green growth dissemination has been noticed, and those green growths have been disseminated to hotels and other stakeholders. This approach made it hard for hotel guests to be aware of green growth. Another explanation was that the low knowledge of customers has led to less influence on hotel green business-standard implementation. It has been reported that hotel guests were aware of general knowledge of the environment



rather than specific topics like green growth policies. Hotel guests' understanding of environmental concepts has grown as a result of what they've learned in schools, universities, and on social media.

Figure 4.1 shows that IF1.3 "Customers' Knowledge of Green Tourism" received a score of 2.80, while IF1.3 "Customers' Knowledge of Green Tourism" received a score of 2.80. This score was between "disagree" and "neutral". A green tourism initiative has started promoting green tourism and environmental protection by encouraging tourism to plant one tree for each tourist. To implement this initiative, tourism gardens, each of which consists of five hectares, have been prepared in 11 provinces, including Siem Reap, Preah Sihanouk, etc. (Laroute Angkor, 2013). "Green tourism" was an initiative to encourage tourists to plant trees during their visit to Cambodia. Green campaigns have been disseminated and spread on social media to reach many people. The score could be explained by the fact that not many hotel guests were aware of green tourism innovation. Low general knowledge of green tourism was due to some reasons: hotel guests were not interested in green tourism, even though green tourism has been spread on television or social media to boost tourism participation in tree planting. Another way was explained that low knowledge of hotel guests about green growth has caused the low level of green business standards in hotels.

As shown in figure 4.1, IF1.4 "Loyalty of customers" was scored by hotel representatives with a score of 2.87%. This score is between "disagree" and "neutral". This score explains that not many hotel guests have come to stay in hotels due to only a single factor of green practice. This guest loyalty could be regarded as the primary motivator influencing hotel owners' decisions to implement green in their establishments. It has been confirmed that 40 to 70% of the guests who come to stay in hotels have been noticed, but those loyalties have been the result of a combination of factors like good service, clean rooms, and good locations.

#### **4.4.1.2. Regression of Customers' Support and GBSI in Hotels**

This part analyses the prediction of IF1 "customers' support" on GBSI in hotels. Hypothesis 6 was that "there is no significant prediction of green business-standard implementation in hotels" by Influencing Factor 1: "Staff Supports."



Multiple linear regression analyses were employed to address hypothesis 5. The multiple linear regression was between Influencing Factor 1 "Customers' Supports" and green business-standard implementation (GBSI) in hotels (dependent variable). The Influencing Factors (IF1) consist of four variables:

- IF1.1: the customers' willingness to pay extra payments "
- IF1.2: "Customers' knowledge of green growth"
- IF1.3: "customers' knowledge of green tourism"
- IF1.4: "Customers' loyalties."

Table 4.8 indicated that IF1: "Customers' Support" could predict GBSI in hotels ( $R = .823$ ,  $R^2 = .677$ ,  $P = 0.05$ ). Table 4.8 showed that 67.75% of the variance of hotel GBSI can be predicted by IF1 "Customers' Support" in this model. This means that the increase in one unit of the score of IF1: "Customers' support for GBSI in hotels" led to an increase of 0.823 units in the score of "GBSI in hotels."

Table 4. 8: Prediction of Staff Support on GBSI in Hotels (IF1)

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
R= .823 <sup>a</sup> , R <sup>2</sup> =.677, F=76.675, P=.000						
1	(Constant)	1.513	.104		14.569	.000
	IF1.1	.061	.048	.068	1.273	.205
	IF1.2	.088	.058	.122	1.507	.134
	IF1.3	.352	.049	.623	7.227	.000
	IF1.4	.078	.036	.134	2.184	.031

Source: developed by author, 2021

The IF1.3: "Customers' Knowledge on Green Growth" and IF1.4: "Customers' Loyalty" contributed to the GBSI in hotels. The increase in one unit of the score of IF1.3: "Customers Knowledge on Green Growth" rose by 0.352 units of the score of "GBSI in hotels" and the rise of one unit of the score of IF1.4: "Customers Loyalty" led to an increase of 0.078 units of the score of "GBSI in hotels."

The interview with the people who have stayed in hotels is shown in Table 4.9, which is the output from multiple regression of the knowledge of policy, knowledge of green



hotels, willingness to pay extra payments for green hotels (independent variables), and the numbers of people staying in green hotels. Table 4.9 indicates that customers' support statistically predicts staying in green hotels. The frequency of green hotels was explained by knowledge of green hotels of 50.9% with a significance of 0.005 and by the willingness to stay in green hotels of 26.1% with a significance of 0.001.

Table 4. 9: Regression of Customer Support and Staying at Green Hotels

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
R=0.872, R2=0.761, Adjust R=0.752, F=89.75, Sig=0.00					
(Constant)	.516	.178		2.904	.004
Knowledge of Green Policies	.264	.185	.211	1.429	.156
Knowledge of Green Hotels	.509	.179	.389	2.845	.005
Willing to Stay in Hotels	.261	.080	.192	3.269	.001
Extra Payment	.198	.149	.160	1.323	.189

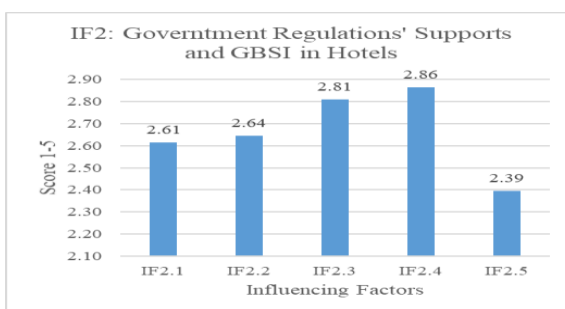
Source: developed by author

#### 4.4.2. Government Regulations and GBSI in Hotels

##### 4.4.2.1. Average Score of Government Regulations

The average computation through descriptive statistical analysis in figure 4.2 indicated that three variables including IF2.1 "national green growth roadmap," IF2.2 "green growth policy," IF2.3 "green growth strategy to encourage hoteliers to apply green practice," IF2.4 "Green Tourism," and EF2.5 "Social Action on Green Practice," were The result showed that all the three variables mentioned above were scored at a low level that was somewhere between "disagree" and "neutral".

Figure 4. 2: Score of government policies/strategies' influence on hotel GBSI



Source: Developed by the researcher



IF2.1 "National green growth roadmap" was scored at "2.61". In Cambodia, energy was needed for socio-economic development. The RGC has promoted energy security. The Royal Government of Cambodia (RGC) has encouraged renewable energy. The Royal Government of Cambodia produced a national green growth roadmap in 2009 that addresses seven issues. Of those, three sectors were related to access to clean water, renewable energy, and non-chemical. RGC has provided an electricity service that minimizes the negative impacts on the environment. The RGC has encouraged the private sector to provide renewable energy electricity services. The national green growth roadmap has been introduced and shared with hoteliers through workshops and meetings. Figure 4.2 indicated that the influence of the green growth roadmap on hotel green business-standard implementation was scored at a low level (score 2.61). The limitation of hotel owners and managers on the green growth roadmap was a barrier for hoteliers to be influenced to implement green knowledge in hotels. The green growth roadmap has been shared and delivered to hotel representatives by mainstreaming the topics in meetings, workshops, etc., but hotel managers or representatives understood less about the green growth roadmap as some hotels were far from the provinces where it was hard to allocate their time to attend green growth awareness workshops.

IF2.2 "Green growth policy" was scored as "score 2.64". The National Council on Green Growth approved the national policy on green growth in 2013 to balance economic development, environmental protection, and the sustainable use of natural resources. The policy aims to enhance the effective usage of water resources, access to safe foods, and access to efficient renewable energy. To achieve this objective, the private sectors are planning for ecological safety, quality of life, and efficiency of the green economy and are encouraging public participation in green growth principles. The 3R principle (reduction, reuse, and recycling) was planned to be promoted for natural use efficiency (NCGG & MoE, 2013). The tourism department and tourism ministry have disseminated the national policy on green growth for hotel representatives to increase understanding of the policy and push hotels to apply the policy, but not much information has been absorbed by hotel managers or representatives. Table 4.2 demonstrated that green policies had little influence on hoteliers' decisions to implement green in their properties. Limited understanding of green growth policy by hotel managers and representatives may have less influence on hotel managers and representatives.



IF2.3 "Green growth strategy" was scored at a low level (score 2.81). The National Council on Green Growth approved the national strategic plan on Green Growth 2013-2030 in 2013 to promote the national economy with the reduction and prevention of environmental pollution, natural resource management, and sustainable water resource management. The strategic plan has fostered a green environment and natural resource management, green investment, good governance, and green growth. In green tourism development, the Royal Government of Cambodia has encouraged green tourism investment to help reduce expenses on the use of energy, water, and waste, maintain ecosystem value, and support private sectors for green tourism. The influencing factor of IF2.4 "green business-standard implementation" in hotels from the green growth strategic plan was a low score (2.81). Hotel representatives have confirmed that they were less aware of the green growth strategic plan. The green growth strategic plan was not the main driver to encourage hoteliers to go green in their hotels. Even though it has been confirmed by tourism departments in research provinces that they have shared green growth strategies with hotel representatives, hotel managers have declared that they have limited knowledge of green growth strategic plans. Low knowledge of hotel managers and owners about the strategic plan was less influential on the green business-standard implementation in hotels.

IF2.4 "Green tourism" was scored low (score of 2.86). To promote green tourism and environmental conservation, Cambodia has started a campaign called "One Tourist, One Tree". Tourism gardens have been prepared in 11 provinces in Siem Reap, Preah Sihanouk, and Kratie with a minimum size of five hectares for each garden. This campaign has been attractive to tourists because it could provide memories for tourists. Green tourism campaigns could have strongly encouraged hoteliers to apply green practices in their hotels. Figure 4.2 showed that this variable was scored (score 2.86), which almost reaches "Neutral". Green tourism has spread so much on television and social media that it has enabled some hotels to be aware of those campaigns. The score could be explained by how green tourism has contributed and encouraged some hotels to consider green practices in their hotels.

IF2.5 "Social actions toward green practices" were scored at "2.39". Many social actions have been organized to promote green in hotels and contribute to environmental protection by reducing environmental impacts from hotels or any investment activity. Those social events or actions include plastic reduction campaigns and plastic-free July



campaigns. Plastic reduction campaigns have been organized by the Ministry of Environment and CSOs in Siem Reap and Preah Sihanouk provinces to encourage people and investors to reduce plastic usage through the "3Rs": reduce, reuse, and recycle (Vong, 2019). "Plastic Free July" is a campaign that has been carried out in particular in many developed countries, and the campaign started in Siem Reap province, Cambodia for four years to tackle a plastic bag issue, and they were looking for a solution (Caruana, 2019). But based on the interview with hotel representatives (figure 4.38), the influence of social actions on the degree of "green business-standard application" was still weak. Hotel representatives and managers were aware of those campaigns, but it has been noticed that participation in those campaigns was not compulsory for hoteliers to participate in and carry out. This was voluntary.

#### **4.4.2.2. Regression of Government Regulations and GBSI in Hotels**

This part analyses the prediction of IF2 "Government Regulations' Support" on GBSI in hotels. Hypothesis 6 was that "there is no significant prediction of Green Business Standard implementation (GBSI) in hotels" by Influencing Factor 2: "Government Regulations' Support."

Multiple linear regression analyses are employed to address hypothesis 6. The multiple linear regression analysis involves influence factor 2 ("government regulations' support") and green business-standard implementation (GBSI) in hotels (dependent variable).

- IF2.1: "Green Growth Roadmap"
- IF2.2: "Green Growth Policy"
- IF2.3: "Green Growth Strategy"
- IF2.4: "Green Tourism"
- IF2.5: "Social Action on Green Practices"

Table 4.10 indicated that IF2: "Government Regulations' Support" could predict GBSI in hotels ( $R = .756$ ,  $R^2 = .571$ ,  $P = 0.05$ ). Table 4.10 showed that 57.1% of the variance of hotel GBSI can be explained by IF2 "Government Regulations' Support" in this model. The increase in the score of IF2 "Government Regulations' Support" led to a rise of 0.75 units in the score of "GBSI in hotels."



Table 4. 10: Government Regulation Supports and GBSI in Hotels

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	R=.756a, R <sup>2</sup> = .571, Adjusted R <sup>2</sup> = .554, F=33.540, Sig=.000b					
1	(Constant)	.218	.274		.797	.427
	IF2.1	.010	.038	.016	.255	.799
	IF2.2	.241	.086	.215	2.789	.006
	IF2.3	.541	.109	.413	4.940	.000
	IF2.4	.147	.041	.225	3.613	.000
	IF2.5	.087	.034	.165	2.538	.012

Source: developed by author

Table 4.10 showed that IF2.2: "Green Growth Policy", IF2.3: "Green Growth Strategy", IF2.4: "Green Tourism" and IF2.5: "Social Action on Green" contribute to the GBSI in hotels.

The increase in one unit of the score of IF2.2: "Green Growth Policy" increases by 0.241 units of the score of "GBSI," while the increase in one unit of the score of IF2.3: "Green Growth Strategy" increases by 0.541 units of the score of "GBSI in hotels." The increase in one unit of the score of IF2.4: "Green Tourism" increases 1.47 units of the score of "GBSI in hotels" and the increase in one unit of the score of IF2.5: "Social Action on Green" increases the 0.087 unit of the score of "GBSI in hotels."

#### 4.4.3. Perceived Benefits and GBSI in Hotels

Perceived benefits and "GBSI in hotels" are analyzed through testing hypothesis 8: "There is no prediction of perceived benefits from GBSI in hotels" and "GBSI in hotels" and research question 3: "How do influencing factors affect GBSI in hotels?" In this part, two parts are outlined: the average score of perceived benefits on GBSI in hotels (4.4.3.1) and the regression of IF4: "Perceived Benefits from GBSI in Hotels" and "Degree of GBSI in Hotels" as mentioned in (4.4.3.2).

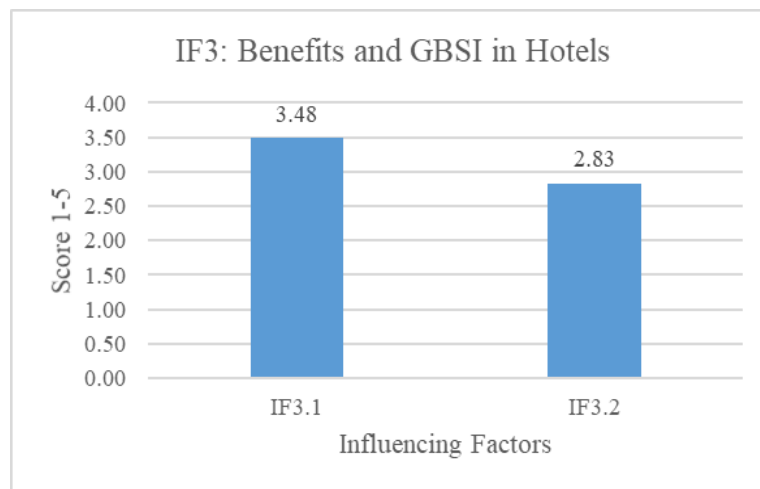
##### 4.4.3.1. Average Score of Perceived Benefits and GBSI in Hotels



The average score of the "Perceived Benefits" from GBSI in hotels was computed through a descriptive statistical tool. The IF4: "Perceived Benefit from GBSI in Hotels" consists of two variables: IF4.1: "Cost Reduction from GBSI in Hotels" and IF4.2: "Hotel Image Enhancement from GBSI."

The results of the analysis in figure 4.3 suggested that the average score of IF3.1 "cost reduction" (score 3.48) was higher than the average score of hotel reputation variables.

Figure 4. 3: Score cost reduction, social actions and images' influence on GBSI



Source: Developed by the researcher

IF3.1 "Cost reduction" was scored at 3.48, which was located between "Neutral" and "Agree". The score of cost reduction leading to green practice was higher than other influencing factors. The high score for "cost reduction" explains that cost reduction has more influenced the decision-making of hotel owners and managers to apply green practices in hotels. Cost reduction could contribute to the application of green practice in hotels, and such an approach has continued and encouraged hoteliers to apply green in hotels. Some of the hotel costs were related to the amount of energy and water usage in hotels. Through green practice, water usage in hotels has been saved as they have innovated some water facilities to save water and set up some systems to save water. Energy is also important and is considered by hoteliers for any innovative actions to save energy. Hotels have tried innovating facilities to save energy, like bulbs, air-cons, green buildings, etc.



IF3.2 "Hotel image enhancement" was scored at 2.83, which almost reached "Neutral." The influence of "hotel image enhancement" from green practices in hotels was a factor. Energy-saving and water-saving were not so attractive to guests, and it was not a direct influence factor to enhance the reputation of hotels. It has been reported that the activities of green practices in enhancing the image of hotels were corporate social responsibilities. Some hotels have innovated to help with social actions. Besides income orientation, they have tried sharing some of their benefits from business with stakeholders. Some models have been created, like supporting school buildings for poor children, providing food for orphans, etc. Based on the score, it could be explained that some hotels have implemented a green business-standard because it can contribute to enhancing the reputations of hotels.

#### **4.4.3.2. Regression of Perceived Benefits and GBSI in Hotels**

This part examines the prediction of IF3: "Benefits" from GBSI in hotels and GBSI in hotels. Hypothesis 8 was that "there is no significant prediction of Green Business Standard implementation (GBSI) in hotels" by Influencing Factor 3: "Perceived Benefits" from GBSI in hotels."

Multiple linear regression analyses were employed to address hypothesis 8. The multiple linear regression was between Influencing Factor 3: "Benefits" from GBSI in Hotels and green business-standard implementation (GBSI) in Hotels (dependent variable).

- IF3.1: "Hotel cost reduction"
- IF3.2: "Hotel image enhancement"

Table 4.11 suggested that IF3: "Perceived benefits from GBSI in hotels" could predict GBSI in hotels ( $R = .823$ ,  $R^2 = .677$ ,  $P < 0.05$ ). Table 4.11 showed that 67.7% of the variance of hotel GBSI can be explained by IF3: "Perceived Benefits" from GBSI in hotels" in this model. Table 4.11 also indicated that an increase in one unit of the score of IF3: "Staff Support for GBSI in Hotels" led to a rise of 0.823 units of GBSI in Hotels.



Table 4. 11: Regression of Benefits and GBSI in Hotels

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
Model		R= .823 <sup>a</sup> , R Square=.677, Adjusted R Square= .672, F=135.050, Sig.=.000 <sup>b</sup>				
1	(Constant)	1.039	.127		8.188	.000
	IF3.1	.480	.042	.714	11.362	.000
	IF3.2	.112	.043	.162	2.583	.011

Source: developed by author

The IF3.1: "Hotel cost reduction" and IF3.2: "Hotel image enhancement" contributed to implementing green business standards in hotels. The increase in one unit of the score of IF3.1: "Hotel cost reduction" increased by 0.48 units of the score of GBSI in hotels, and the increase in the score of IF3.2: "Hotel image enhancement" rose by 0.112 units of the score of GBSI in hotels.

#### 4.4.4. Hotel Managers/Owners' Attitudes and GBSI in Hotels

In this part, it investigates the hotel owners' and managers' attitudes and GBSI in hotels through testing hypothesis 9: "There is no prediction of "Hotel Owners'/Managers' Attitude" and "GBSI in hotels" and research question 3: "How do influencing factors affect GBSI in hotels?" In this part, two parts are outlined: the average score of "Hotel Managers/Owners' Attitude" on the GBSI in hotels (4.4.4.1) and the regression of IF4: "Hotel Managers/Owners' Attitude" and "Degree of GBSI in hotels" as mentioned in (4.4.4.2).

##### 4.4.4.1. Score of Managers' Attitudes and GBSI in Hotels

This part addresses research question 3: "How does the influencing factor "Hotel Managers/Owners' Attitude" influence GBSI in hotels?" Through descriptive analysis of the average score of Influencing Factor 4 and how these factors influence the GBSI in hotels, IF4 comprises six variables, including

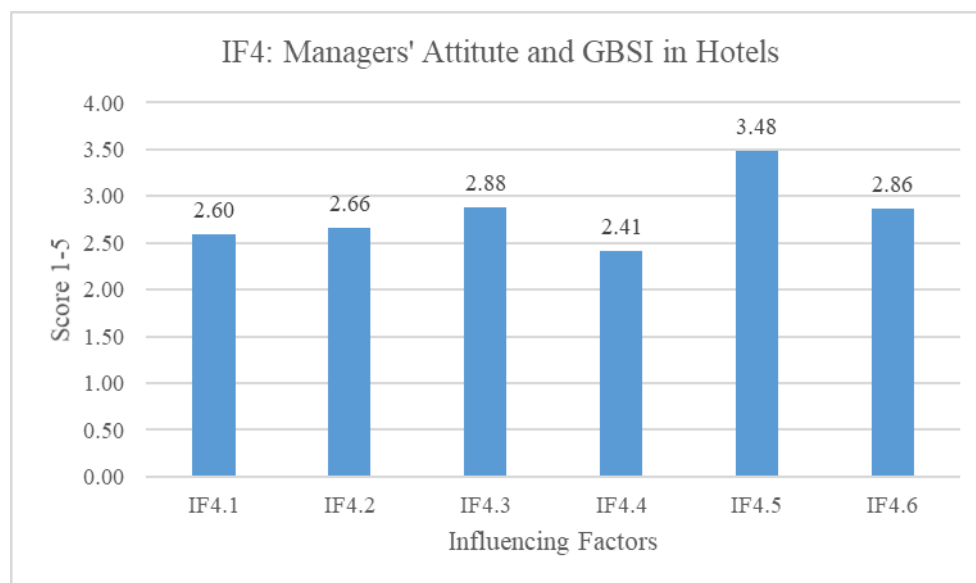
- IF4.1 "Hotel owners/managers on knowledge of the national green growth roadmap"
- IF4.2 "The Knowledge of Hotel Managers/Owners on Green Growth Policy" and



- IF4.3. "The Knowledge of Hotel Managers and Owners on Green Growth Strategy,"
- IF4.5 "Hotel managers/owners on green tourism"
- IF4.5 "Knowledge of Green Instruction/Declaration"
- IF4.6 "Social Action on Green."

Figure 4.5 showed that six variables were scored between "Neutral" and "Agree". Those variables include IF4.1 "Hotel owners/managers on knowledge of the national green growth roadmap," IF4.2 "The Knowledge of Hotel Managers/Owners on Green Growth Policy," and IF4.3 "The Knowledge of Hotel Managers/Owners on Green Growth Strategy," IF4.4 "Hotel managers/owners on green tourism", IF4.5 "Knowledge of Green Instruction/Declaration" and IF4.6 "Social Action on Green."

Figure 4. 4: Knowledge of policies and strategies' influence on hotel GBSI



Source: Developed by the researcher

IF4.1 "The knowledge of hotel owners/managers on national green growth" was scored as "2.60". That was a little below "neutral". The score could be explained by the fact that the hotel managers or owners were limited to understanding the national green growth roadmap that has been developed for promoting green practice in hotels. Low knowledge of the national green growth roadmap was identified as a barrier to implementing the green business standard in hotels. Based on the interviews with directors and deputy directors of provincial departments of tourism in Kampot, Kratie,



Koh Kong, Preah Sihanouk, and Siem Reap provinces, they have confirmed that the knowledge of the green growth roadmap has been delivered to hotel representatives through meetings and training workshops. The departments have limited financial capacity to organize workshops or meetings to raise awareness of and knowledge of the green growth roadmap. It has been confirmed that some hotels have sent some ordinary staff to join in the workshops, and some hotels were so busy with their business that it was hard to allocate the busy time to join in the workshops. The staff who have gained knowledge of the green growth roadmap have not transferred their knowledge of the green growth roadmap to hotel staff and have not reported it to their hotel supervisors or managers. Hoteliers found it hard to access any information about the green growth policy roadmap.

Similar to the green growth roadmap, IF4.2 "The green knowledge of hotel managers/owners on green growth policy" was scored as "2.66", which was located below "Neutral". It could be explained that some hotel managers and owners couldn't be aware of green growth policies that have been developed to promote green practices in hotels. This low education was due to the absence of policy orientation workshops and meetings. Another factor was that hotel representatives found it hard to access green growth policies. Moreover, hotel representatives seemed not interested in learning and gaining knowledge of the topic, as the policy mentions general green applications for any investment rather than specific topics for the hotels. The ordinary staff of hotels have been sent to attend workshops, and the knowledge of policy that has been equipped for staff through workshops has not been shared with their supervisors or managers. Low knowledge of hotel owners/managers on green growth policies in hotels was identified as a barrier for green business implementation in hotels too. The interview with the provincial department of tourism revealed that the departments have shared green growth policies with hotel representatives through mainstreaming this topic in workshops or meetings. Some hotel representatives who were absent in meetings or workshops have caused low knowledge of hotel managers and staff.

IF4.3 "Hotel managers/owners' knowledge of green growth strategy" was scored as "score 2.88", which means below "Neutral". It could be explained that hotel managers and owners have low knowledge of green growth strategies. The low knowledge of hotel managers and owners has less influence on their decisions on hotel green business-standard implementation. Based on the interviews with provincial tourism



department directors and leaders, they stated that a green growth strategy has been shared and delivered to hotel representatives through workshops or meetings. Some hotel representatives have not joined in workshops, while some hotels have nominated their staff to attend the workshop. Another reason was that the staff who had attended the workshop had not transferred and shared their knowledge with supervisors or managers of the hotels.

IF4.5 "One variable of knowledge of hotel managers/owners on green instruction and green tourism" was scored high (3.48) and this variable was identified as a more influential factor for implementing green knowledge. High knowledge of hotel managers/owners could lead to more influence on hotel green business-standard implementation. Green tourism has been spread on social media and television, which has enabled hotel managers and owners to gain the message of green tourism.

IF4.6 "the recognition of hotel's managers/owners on the importance of green business standards in hotels" was scored at "score 2.86". It can be explained that the hotels' managers/owners are less interested in the green business-standard implementation. Hotels have been encouraged by ministries to apply for green hotels to be awarded, but the standard of green hotels has not been instructed to hotels' representatives so that they could be aware of that concept and make hoteliers implement green standards in hotels.

#### **4.4.4.2. Regression of Hotel Owners/Managers' Attitude and GBSI in Hotels**

This part analyses the prediction of IF4: "Hotel Managers/Owners' Attitude" on GBSI in hotels. Hypothesis 9 was that "there is no significant prediction of Green Business Standard implementation (GBSI) in hotels" by Influencing Factor 4: "Hotel Managers/Owners Attitude"

Multiple linear regression analyses were employed to address hypothesis 9. The multiple linear regression between Influencing Factor 4: "Hotel Managers/Owners' Attitude" and Green Business Standard Implementation (GBSI) in hotels (dependent variable).

- IF4.1: "Hotel Owners' or Managers' Knowledge on the Green Growth Roadmap"
- IF4.2: "Hotel Owners' or Managers' Knowledge of Green Growth Policy"



- IF4.3: "Hotel Owners' or Managers' Knowledge on Green Growth Strategy"
- IF4.4: "Hotel Owners' or Managers' Knowledge of Green Tourism"
- IF4.5: "Hotel Owners' or Managers' Knowledge of Green Standards/Declaration on Green Practice"

IF4.6: "The Recognition of Hotel Owners/Managers on Green Practices in Hotels"

Table 4.12 suggested that IF4: "Hotel Managers/Owners' Attitude" could predict GBSI in hotels ( $R = .860$ ,  $R^2 = .739$ ,  $F = 58.913$ ,  $P = 0.05$ ). Table 4.12 illustrates that 73.9% of the variance of hotel GBSI can be explained by IF4: "Hotel Managers/Owners' Attitude" in this model. This means that "Hotel Managers/Owners' Attitude for GBSI in hotels increased by one unit, which led to an increase of 0.86 units in the score of GBSI in hotels.

Table 4. 12: Regression of Hotel Managers/Owners Attitude and GBSI in Hotels

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
R=.860, R Square= .739, Adjusted R Square= .726, F= 58.913, Sig.= .000						
1	(Constant)	.500	.190		2.627	.010
	IF4.1	.006	.030	.009	.192	.848
	IF4.2	.061	.027	.115	2.282	.024
	IF4.3	.131	.032	.198	4.048	.000
	IF4.4	.351	.042	.530	8.397	.000
	IF4.5	.106	.038	.159	2.773	.006
	IF4.6	.174	.057	.164	3.074	.003

Source: developed by author

IF4.2: "Hotel Owners/Managers' Knowledge on Green Growth Policy", IF4.3: "Hotel Owners/Managers' Knowledge on Green Growth Strategy", IF4.4: "Hotel Owners/Managers' Knowledge on Green Tourism", IF4.5: "Hotel Owners/Managers' Knowledge on Green Standard/Declaration on Green Practice", IF4.6: "The Recognition of Hotel Owners/Managers on Green Practices in Hotels" contribute to the influence on the implementation of the green business standard in hotels."

Table 4.12 illustrates that

- An increase of one unit in the score of IF4.2: "Hotel Owners/Managers' Knowledge of Green Growth Policy" led to an increase of .061 units in the score of "GBSI in hotels."



- Increase one unit of the score of IF4.3: "Hotel Owners/Managers' Knowledge on Green Growth Strategy" increased. 131 units of "GBSI in hotels"
- An increase of one unit in the score of IF4.4: "Hotel Owners/Managers' Knowledge of Green Tourism" led to an increase of 0.351 units in the score of "GBSI in hotels."
- An increase of one unit in the score of IF4.5: "Hotel Owners' or Managers' Knowledge of Green Standards/Declaration on Green Practice" led to an increase of 0.106 units in the score of "GBSI in hotels."
- Rise of one unit in the score of IF4.6: "The recognition of hotel owners/managers on green practices in hotels" led to an increase of 0.174 units in the score of "GBSI in hotels."

#### **4.4.5. Staff's Supports and GBSI in Hotels**

In this part, it investigates "Staff Support" and "GBSI" in hotels through testing hypothesis 5: "there is no prediction of" Staff Support "and" GBSI in hotels" and research question 3: "How do influencing factors "Staff Support" affect GBSI in hotels?" In this part, two parts are outlined: the average score of "Staff Support" on GBSI in hotels (4.4.5.1) and the regression of IF5: "Staff Support" and "Degree of GBSI in hotels" as mentioned in (4.4.5.2).

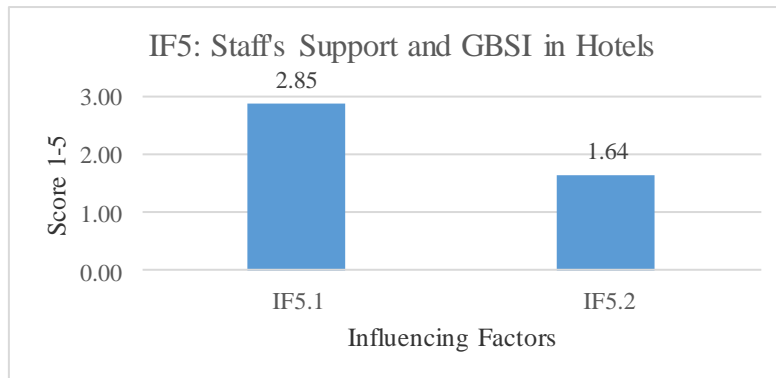
##### **4.4.5.1. Score of Staff's Supports and GBSI in Hotels**

In this part, the analysis focuses on IF5: "Staff Support for Green Business Standard Implementation in Hotels" to address research question 3, "How do influencing factors like "staff support" influence GBSI in hotels." IF5 consists of IF5.1: "Staff Knowledge" and IF2: "Staff Interest in Green Business Standard Implementation."

Figure 4.5 suggested that IF5.1: "Knowledge of Staff on GBS Application in Hotels" was scored and almost reached "2.85 scores" below "Neutral". This can be explained by the fact that this variable could influence little adopting the green business standard in hotels, while IF5.2: "The interests of staff in green implementation in hotels" was scored 1.64 between "strongly disagree" and "disagree." The interests of the staff could have less influence on GBSI in hotels.



Figure 4. 5: Average Score of Staff Support for GBSI in Hotels



Source: developed by author

#### 4.4.5.2. Regression of Staff's Supports and GBSI in Hotels

This part analyses the prediction of IF5: "Staff Support for GBSI in hotels" on GBSI in hotels. Hypothesis 10 was that "there is no significant prediction of Green Business Standard implementation (GBSI) in hotels" by Influencing Factor 5: "Staff's Support for GBSI in Hotels."

Multiple linear regression analyses were employed to address hypothesis 9. The multiple linear regression between Influencing Factor 5: "Staff Support for GBSI in Hotels" and Green Business Standard Implementation (GBSI) in Hotels (dependent variable)

- IF5.1: "Staff Knowledge on Green Practice"
- IF5.2: "Staff interest in green practices"

Table 4.13 suggested that IF5: "Staff Support" could predict GBSI in hotels ( $R = .423$ ,  $R^2 = .179$ ,  $F = 14.089$ ,  $P = 0.05$ ). Table 4.13 illustrates that 17.9% of the variance of hotel GBSI can be explained by IF5: "Staff support" in this model. Table 4.13 indicates that one unit increase in the score of IF5 "Staff Support" leads to a rise of 0.23 units in the score of GBSI in hotels.



Table 4. 13: Regression of Staff Support and GBSI in Hotels

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	R=.423, R <sup>2</sup> =.179, F= 14.089, Sig.= .00					
1	(Constant)	2.136	.198		10.799	.000
	IF5.1	.140	.056	.198	2.481	.014
	IF5.2	.301	.066	.366	4.584	.000

Source: developed by author

IF5.1: "Staff knowledge of GBSI in hotels", and IF5.2: "Staff Interest in GBSI in hotels" could influence the implementation of the green business standard in hotels. Table 4.13 indicated that one unit increase in score of IF5.1 "Staff Knowledge of GBSI in hotels" leads to a rise of 0.301 units in the score of GBSI in hotels, while one unit increase in score of IF5.2 "Staff Interest in GBSI in hotels" leads to a rise of 0.14 units in the score of GBSI in hotels.

#### 4.5. Relation between Hotels and GBSI in Hotels

This part analyses the projection of the different rates of the hotels (different stars) on the degree of GBSI in hotels. Six different kinds of hotels were classified: unrated hotels, 1st-star hotels, 2nd-star hotels, third-star hotels, fourth-star hotels, and fifth-star hotels. Table 4.14 indicated that 29.51% of the hotels were unrated. Moreover, 6.8% of the hotels were rated as first-star hotels, 12.9% of the hotels were ranked as second-star hotels, 18.9% of the hotels were ranked as third-star hotels, 28.0% of the hotels were ranked as fourth-star hotels, and 3.8% of the hotels were ranked as fifth-star hotels.

The relationship between hotel classification (by different stars) and GBSI in hotels was shown in table 4.14. Table 4.14 indicated that the classification of the hotels could predict the GBSI in hotels (significance =.00). The GBSI in hotels can be explained by different hotel classifications by 13.9%. An increase of one unit in one-star hotels led to an increase of 0.159 units of GBSI in hotels.

Table 4. 14: The relationship between the different rates of hotels and GBSI in Hotels

	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
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R=.382a, R Square=.146, Adjusted R Square= .139					
Model	B	Std. Error	Beta		
(Constant)	2.677	.094		28.549	.000
Hotel classification	.159	.034	.382	4.715	.000
a. Dependent Variable: GBSI					

Source: developed by the author

#### 4.6. Summary of the Findings

The average score output was that energy usage, water usage, and air quality management were scored at a high level because those variables were directly related to hotel cost reduction, while three variables, human resource and internal practice, waste management, green product usage, and green business incentives, were scored at a low level.

There was an indication that positive impacts of GBSI on water reduction, energy reduction, and cost reduction were scored at a high level, while the impacts of business standard implementation on guest increase and increase in profit were scored at a low level. The four dependent variables like water reduction, energy reduction, cost reduction, guest increase, and profit increase could be predicted by a green business-standard implementation (GBSI) in hotels (independent variables).

Through knowledge and loyalty, the IF1 "customer's support" could influence the degree of GBSI in hotels. But customer payments could not predict GBSI in hotels. Another factor was that the degree of GBSI in hotels can be influenced by IF2 "Government Regulation" as well. Those regulations and policies include a green growth policy, a green growth strategy, and green tourism.

Moreover, the degree of GBSI in hotels can be predicted by IF3 "Perceived Benefit from Green Practice in Hotels." This factor's variables included cost reduction and hotel reputation, which encouraged hotel managers or owners to implement green standards in hotels. IF4: The hotel managers/owners' attitude could also predict the application of green business in hotels. The attitude toward green application in hotels consists of hotel managers' or owners' knowledge of green growth policy, green growth strategy, green tourism, and hotel owners' or managers' recognition. IF5: staff support could influence the practice of green business standards in hotels. Those variables which



could contribute to GBSI in hotels include hotel staff knowledge of green and being interested in green applications.



## **CHAPTER FIVE**

### **DISCUSSION**

#### **5.1. Introduction of the Chapter**

This chapter aims to argue this research finding and previous studies with four structural sections: an introduction, a summary of research results, a discussion, and a summary of the discussion. This overview outlines the structure of this chapter, the research results, the discussion of the findings, and the conclusion of the discussion section.

#### **5.2. Summary of Results**

In brief, high scores for energy usage, water usage, and air quality management in hotels were computed, while low scores for three variables were computed, including human resource and internal practice, waste management, green product usage, and green business incentives.

High average scores of the impacts of green business-standard implementation on water reduction, energy reduction, and cost reduction were computed, while low average scores of the impacts of business standard implementation on increase in guests and increase in profit were computed. GBSI could predict water reduction, energy reduction, cost reduction, guest increase, and profit increase.

The influencing factors include IF1: "Customers' Support", IF2: "Government Regulation's Support", IF3: "Perceived Benefits", IF4: "Hotel Managers/Owners' Attitude", and IF5: "Staff Support" could predict GBSI in hotels.

#### **5.3. Degree of Green Business Standard Implementation**

##### **5.3.1. Internal Practice and Human Resource**

This research finding indicated the majority of the sampled hotels haven't had any information on green practice hotels for guests, the hoteliers have not provided capacity for environmental protection for staff, and the hotels have not sent their staff to join in environmental activities. The research finding contrasted with Yusof and Jamaludin (2014), who conducted their survey in Malaysia and revealed that for hotel A in Malaysia, there was no problem accessing information on green practices or environmental information as the information could be accessed on the internet. This



research finding was consistent with Yusof and Jamaludin (2014)'s research in hotels B, C, and resort B, which indicated the challenges of training or sharing sessions for staff because they were not interested in green practice. The research finding was that green and environmental programs were additional tasks for staff. This environmental program has caused staff to resign from hotels as they have felt that the program was their additional work. But this research finding contrasted with the same research by Yusof & Jamaludin (2014) in hotels A and B in Malaysia, which found that staff were interested in training programs and they were interested in participating in green practice activities and school programs. The research conducted by Deraman et al. (2017) mentioned that it could start with some simple activities like the instruction of switching off any energy devices or equipment when the lights in hotels are not used as much energy as possible. The research also found that during the Guestline Days in India, staff have been encouraged to join in environmental initiatives through an awareness program on vehicle emissions, which has encouraged staff to carpool (share car journeys) and use bicycles. Not only staff but also hotel guests have been encouraged to ride bicycles to reduce vehicle emissions. To enable guests to join in environmental activities, hotels have encouraged guests to hire bicycles from hotels. Moreover, motivation and rewarding environmental management systems should be considered (Bohdanowicz et al., 2011; Mbasera, 2015).

This research finding indicated that most of the sampled hotels have assigned staff in charge of environmental management in hotels and have instructed staff to switch off unnecessary devices in hotels. Ying-Chang Chen and Yu-Ta Chen (2012) confirmed that staff professional knowledge is important for implementing green policies. This research finding was similar to the research conducted by Ksaim (2009) and Samdin et al. (2012) that indicated that the importance of training in sustainable tourism practice in hotels has been acknowledged. Staff training on topics related to sustainable tourism was identified as a factor for enhancing sustainable tourism practices in hotels (Kasim & Dzakiria, 2009; Samdin et al., 2012). Every hotel in Jamaica has offered its staff members relevant information on sustainable tourism practices (Meade & Pringle, 2001; Samdin et al., 2012). A combination of training courses about areas of energy management, water consumption, and recycling of waste should be offered to staff.

This research found that some hotels have information on green growth and development in hotels and have participated in environmental award competitions,



green award competitions, and budget allocation for green business standards. This research finding was explained by another researcher who said that information on green but not specifically on green growth was placed in hotels so that guests could save water and energy in hotels (Grant, 2015).

Few hotels have sent their staff to work with rural communities, while the majority of the sampled hotels have not had any activities to support local communities. This research finding contrasts with the research done by Graci and Kuehnel (n.d.) that showed that hotels should help to develop rural communities in their area through consulting with local communities and identifying their needs and concerns. Through development support, local communities can benefit from tourism in areas like education, health, sanitation, employment, local charities, and purchasing from local suppliers.

### **5.3.2. Environmental Protection in Hotels**

#### **a. Water Usages**

This research finding showed that most hotels have shared and delivered training courses on energy-saving for hotel staff so that they can save energy. When hotel staff were aware of the importance of water and energy-saving, they could contribute and help to save those resources. This research finding was supported by the research by Bohdanowicz et al. (2011) who recommended that hotels should have training programs so that they could deliver training on water saving to staff to encourage staff to participate in water-saving in hotels (Mbasera, 2015).

This research finding indicated that most of the sampled hotels have water-saving toilets that could save some water. This research finding agreed with Grant's research finding (2015) that low-flow toilets were installed in hotels to reduce water usage. The combination of low-flow toilet usage and showerheads in the Orchard Hotel in San Francisco reduced the water by 20%. Another study found similar findings that low-flow toilets were used by all hotels except for the Golden Palm Tree (Yusof & Jamaludin, 2013).

This research finding was that the majority of sampled hotels have used water-saving showerheads that could save water usage in hotels. Grant (2015) found similar findings



to this research, finding that water-saving showerheads in the Orchard Hotel in San Francisco have reduced water consumption by 20 percent. The new showerheads generated just 1.5 gallons of water per minute in comparison to 2.3 gallons previously (Grant, 2015). A similar finding in this research with other research was that low-flow showerheads have been used by all hotels except for the Golden Palm Tree (Yusof et al., 2013). Similar research results found by OECDD (2002) indicated that Saunders Group installed low-flow showerheads at Boston Park Plaza. Low-flow showerheads with a combination of filtration systems in the hotels reduced the water by about 65%. That could save \$45,000 annually. Low-flow showerheads could save a hotel 10 gallons of water every five minutes. That could save over \$3,600 annually. Guestroom showers used too much water, so shower restrictors were installed. These shower restrictors reduced water consumption from 22 to 12 liters per minute (OECDD, 2002).

Few sampled hotels had rainwater storage to store rainwater for use in hotels. A similar finding found by Yusof and Jamaludin (2013) revealed that only two hotels used rainwater harvesting systems that required special piping, but rainwater storage containers were costly and some renovation of the facilities was needed. Moreover, jars have been used by Andaman to collect rainwater to wash guests' feet before entering rooms (Yusof & Jamaludin, 2013). A rainwater harvesting system has not been used by all hotel operators (Yusof & Jamaludin, 2013). This research finding disagreed with the research in Hotel Guestline Days in India that showed rainwater containers have been used to collect rainwater and that rainwater was used for many purposes. Untreated rainwater was used to flush toilets. (b) Filtered, chlorinated, and ultraviolet-filtered water was consumed for cooking and drinking, and (c) wastewater from flushing, bathing, and the kitchen and laundry was collected in grit chambers. The heavy particles which drop to the bottom of the chamber were removed. Then, the water flows to an aeration tank where bleaching powder, ferric chloride, and copper sulphate are added. The water then passes through a multi-layer filter before it is stored and used in the hotel garden and fountains, and excess greywater is used on local agricultural land (OECDD, 2002).

A few sampled hotels in this research have reused water, while many sampled hotels have not reused water. The reused water has been seen in swimming pools. The water has been treated and reused in hotel swimming pools. The other types of used water are discharged into public sewage pipes except for some hotels that are located near the sea.



The wastewater needs to be filtered before being discharged to the sea. There was a discrepancy between this research finding and another study conducted at the Boston Park Plaza hotel. The Boston Park Plaza hotel confirmed that they have invested \$90,000 in the water filtration system and that the water system has allowed greywater to be reused. The wastewater heat recovery technique has been used to recover up to 60% of the energy used to heat water by preheating incoming cold water with recovered heat that is transferred via a heat exchanger unit. The recovery would possibly produce ancillary environmental benefits by reducing the temperature of the wastewater stream and avoiding potential thermal pollution (OECD, 2002). This research finding disagreed with the research of Nhapi and Jijzen (2005), who stated that the water from bathrooms, washing machines, dishwashers, and kitchens was collected separately and reused for gardening or washing cars (Mbasera, 2015). The towels were reused, and this practice could reduce water consumption (Timothy & Teye, 2009; Mbasera, 2015).

This research found that guests in some of the sampled hotels in target research provinces have been encouraged to participate in water conservation efforts. Many signs to encourage guests to save water were placed in guest rooms, gardens, etc. This research finding agreed with Yusof and Jamaludin (2013) that all hotel operators have participated in the encouragement for hotel guests to save water and reuse towels and linens.

Most of the sampled hotels in this research have used signs so that guests help save water. The signs were placed in rooms, bathrooms, and gardens. The finding was similar to other research that found when green card systems were placed in bathrooms in guestrooms, hotel guests wanted to have new towels (Yusof & Jamaludin (2013). Another similar finding of another research was that Westin Taipei hotels, such as Leefoo Inn and Leefoo Resort in Kenting, did not offer disposal toiletries except for soap, shampoo, hair conditioner, and shower gel, as they had developed an environmental protection policy in their hotels. The research has also explained that to smoothly implement an environmental policy, the policy must be educated for three months. Many cards and messages on environmental protection were placed on desks for customers so that they were aware of the policy. Eighty percent of the customers from western countries thought that such a new measure of environmental protection was not odd, but local tourists complained about five cases of environmental protection actions. Previously, toiletry pouches in hotels should be ready for customers. Later on,



as customers applied new measures, disposable toiletries were not offered to guests (Y.C., Chen & Y.T., Chen, 2012).

### **b. Effective Energy Usages in Hotels**

Most of the sampled hotels in this research have trained staff on energy-saving techniques, and many of the hotels of the sampled hoteliers have used energy efficiency devices in hotels to save energy. It was explained by Yusof and Jamaludin (2013) that all operators adopted energy reduction. LED lights and energy-saving lighting and equipment have been used in hotels. Air-conditioner systems have been regularly maintained and used (Yusof & Jamaludin, 2013). A similar finding was made by Moreo (2008) that energy-saving light bulbs like compact fluorescent light bulbs and energy-star efficient HVAC were used to save energy (Mbasera, 2015). OECD (2002) explored lighting levels, hours of operation, and light intensity in the Hotel Inter-Continental Sydney, Australia. Various up-lighters were too bright. Sanga Säby hotel in Sweden used low-energy light bulbs and fluorescent lights (OECD, 2002). Ying-Chang Chen and Yu-Ta Chen (2012) also identified those hotel staff behaviors that needed to be changed to promote green measurement in hotels and increase their efficiency. To change hotel staff behavior toward green practice in hotels, training was important for staff. Hotels needed to provide training and education to their employees. The training courses for hotel employees would increase their understanding, and it was easy to apply green policies in hotels. The goal of the training was to reduce the environmental impact and energy consumption in the business lifecycle. Rewarding the hotel employee who provided important comments on environmental improvements in hotels should be a priority.

This research finding was that hotel motions/sensors have been used in many hotels. This research finding was proven by another research finding that occupancy sensors were used in hotels to use energy in occupied rooms (Mbasera, 2015). A similar finding was explained by the fact that motion detectors in the Sanga Säby hotel in Sweden switched off lights when rooms were not used. Individual devices were fitted in guestrooms. Indoor temperatures at night in all guestrooms and public areas were reduced by time control systems. Window and door weatherstripping were reviewed or replaced (OECD, 2002). Thai hotels have also used occupancy sensors for the lighting needs of occupants in places. Where dimmable lamp controls have been installed, the



amount of artificial light provided could be regulated according to the amount of natural daylight available. Energy savings vary by location, but lighting costs can be reduced by up to 40% (OECD, 2002).

This research finding indicated that solar panels have been used by some of the sampled hotels, while most hotels have not used solar panels in their hotels because hotel managers thought that solar panels were costly and there was a lack of knowledge among hotel managers on solar usage benefits for economics and benefits. This finding was proved by Jusof and Jamaludin (2013), who explained that hotels have not used solar panels as the solar panels were costly and most hotels couldn't afford to use this technology in their hotel operations. This research seemed to contrast with Allen (2007), who recommended using renewable energies like sunlight energy and wind energy that would make a difference to the hotel's carbon footprint (Mbasera, 2015).

Almost all of the hotels in this research have used door card keys for hotels as it could contribute to saving energy. When guests were out of their rooms, the lights were automatically off. This research finding was similar to the research conducted by OECD (2002) in the Nikko Hotel in Hong Kong, where the hotel installed key-cards to replace buttons, which automatically turned off all electrical units when guests were not in rooms because about one-third of its guests had forgotten to turn off the controlling electrical units when they left their room. This could save US \$0.30 per day per room (OECD, 2002).

This research finding has confirmed that the majority of the sampled hotels have used signs to encourage guests to save energy. This finding was confirmed by OECD's research findings (2002) in Guestline Days in India, where there was a letter inviting guests to "Save the Planet" that was included in the general information package in all rooms. The Guestline Days hotel also has a policy of requesting guests to cooperate through actions such as using less water and turning off the power supply master switch when they leave rooms. A "Water Saving" notice was placed in all guest rooms, reminding guests to save water. Moreover, questions have been requested to be filled in by guests for environmental efforts (OECD, 2002).



### **c. Waste Management**

According to HashemiHezaveh (2016), two types of waste from the hospitality industry are wet waste and dry waste. The wet waste included food waste (Wagh, 2008). Wet waste accounted for more than 50% of the total hospitality waste (Curry, 2012). The hotel was one of the major sources of solid waste generation (Kirk, 1995). It was confirmed that a hotel guest produced an average of one kg of waste per day (International Hotel Environmental Initiative, 2002). The hotel industry was the main source of waste generation, and most of the waste was generated from hotels' lodging and kitchen areas (Omidiani & HashemiHezaveh, 2016). Axler (1973) and Kirk (1995) identified the wastes of hotels, including aluminum, plastics, glass, steel, cardboard, and food waste, as being the main components of hotel waste in some studies (Omidiani & HashemiHezaveh, 2016).

Most hotels in this research have prepared bins or facilities to store and sort the types of waste, but a few hotels haven't had bins, but the bins were not classified for different types of waste. Hilton Slussen in Stockholm has sorted 26 waste types into different bins. In 1997, this waste management practice reduced landfill waste by 76%, or 125 tons per month (ITP, 2008; Styles et al., 2013). Raising environmental awareness should be done for staff to make sure that they are aware of environmental initiatives clearly, as the only level of raising awareness mentioned by Mathews (1990) asserted that sometimes awareness causes people to interpret a situation in a relatively threatening way if they don't understand the raising awareness topics clearly (Chen, 2016).

A few hotels in this research have water treatment facilities to treat water before discharging it to the sea to reduce the impact of seawater on the environment, while the majority of the hotels have not been concerned with the water treatments. This finding disagreed with another study by OECDD (2002) that found hotels had tried installing systems to filter used water. A total of \$90,000 was invested by the Boston Park Plaza hotel to install water filtration systems to treat greywater (OECDD, 2002).

The hotels of this research have not processed leftover food into organic fertilizers. But hotels have different models for using leftover food. For instance, only a few sampled hotels have collaborated with other people to sell leftover food for pig rearing, while the



rest of the hotels have collected that leftover food, and that waste has been taken by waste-collection companies. More consideration of the recycling program was found by OECDD when it was found that Melia and Shangri-La hotels had set up waste recycling programs to recycle waste into organic fertilizers for herb gardens. Waste recycling has enabled hotels to generate RM1000-RM2000 in revenue. One hundred of the hotels have recycled cooking oil, which has been sold to companies for soap, candles, and biodiesel (Yusof & Jamaludin, 2013). A study by the OECD (2002) on Saunders Hotel Group in the USA states that they have created a small worm farm to help compost kitchen scraps. The worms play a role in transforming waste into fertilizers that have been used in an herb garden on the roof of the hotel, and the herbs have been used to supply the hotel restaurant with food. In summer, herbs could supply 40% of the herbs needed in hotel restaurants. It has reduced electricity and gas consumption, and the hotel has reduced its carbon dioxide emissions by 1,581,749 kilograms annually. The hotel has discharged 24,950 cubic meters and has discharged less wastewater each year, which has led to a savings of \$279,588 (OECDD, 2002). The research findings made by OECDD (2002) indicated that all wet garbage from Hotel Guestline Days in India has been composted and used as fertilizer. Excess compost has been sold to local farmers, some of whom have supplied the hotel with fruits and vegetables. Revenue from this practice has been estimated at Rs. 1,369 (US \$39) per month (OECDD, 2002). Zengeni, Zengeni, and Muzambi (2013) found that a greater percentage agreed that donating leftovers was a practice that could reduce operating costs. Donating leftovers was a way of reducing and managing waste (Marlon, 2007; Zengeni et al., 2013). However, Riley (2000) argued that such a practice didn't reduce the costs.

Some hotels' research has been reused in a particular paper that can reduce environmental pollution and reduce the cost of hotels. Those hotels have sold bottles to waste collectors, and a few hotels have reused bottles to contain water as they had their own pure water enterprises. According to Bohdanowicz (2005), 30% of waste is reused or recycled. Hotels have produced an average waste of more than one kilogram per guest per day (Graci & Kuehnel, n.d.). A similar finding by Timothy and Teye (2009) was that the waste could be recycled and that the recycling program was important for hotels (Mbasera, 2015). Kettles (2007) indicated they could save 3,700 pounds of devices and 24 gallons of water from cycling one tone of paper (Mbasera, 2015). Waste could be processed into organic waste for use in community gardens (Swilling &



Anneck, 2006; Mbasera, 2015). Seuring (2001) suggested that it was important to consider purchase policies and supply chains for protecting the environment (Y.C., Chen & Y.T, Chen, 2012). The company's suppliers who have environmental policies should be collaborated with by hotels. Ying-Chang, Chen and Yu-Ta Chen (2012) suggested that working with suppliers that have tried creating energy-saving products is better.

In this study, the majority of hotels sorted their waste into different bins. The research finding was similar to the research conducted by Yusof and Jamaludin (2013) in area B, which indicated that 100% of the hotels participated in the waste separation program. The operators separated the waste into plastics, glass, paper, and organic waste. The solid waste was sold to recycling companies. Another similar research finding of OECD (2002) in the Budapest Hilton Hotel in Hungary states that the wastes such as waste paper, metal cans, and glasses have been collected, separated, and sold for recycling. The hotel bought a waste compactor in 1995 to reduce waste volumes. Through recycling initiatives and compacting non-recyclable waste, the Budapest Hilton Hotel reduced its overall waste volume by more than 30% in 1994 and 1995. The waste compactor costs about \$10,000. However, through waste compactor usage in hotels, waste collection fees were reduced by US \$10,000 in 1995. Within one year, the investment in the waste compactor has been recouped. In addition to the proper disposal of waste generated by hotels, the hotel's collective waste management program helped to overcome problems. The waste collection fee can be saved as trucks have collected waste from several hotels in one round. Collectively, the programs have been informed that they could save hotels around the US \$75,000 per annum (OECD).

Most hotels identified in this research have reused papers to reduce the cost of hotels and environmental impacts. The research found out, similarly to Yusof and Jamaludin (2013) that all hotel operators have applied papers and ink reduction techniques like paper was printed when it was necessary, double sides were printed, the printed papers were reused for notes, and paperless technology was used. Only half of the hotel operators have methods to reduce environmental impact, such as refilling soap and not providing newspapers in guest rooms. Some problems have occurred. For example, there was no newspaper service in guest rooms of Shangri-La hotels, there was no appreciation from guests, and hotel guests have complained about the lack of newspaper service in their rooms, requesting newspaper service every morning in their rooms so



that they could access any information through newspapers (Yusof & Jamaludin, 2013). Similarly, Allen (2007) confirmed that there was another option to reduce papers through an electronic source to access any information (Mbasera, 2015).

Some hotels in this research have educated staff on recycling and solid waste sorting programs. Rao (2002) and Zhu and Sarkis (2004) indicated that environmental performance could entail the reduction of waste and pollution (Fernández, 2015). Pullman et al. (2009) and Theyel (2001) found that waste recycling practices impacted the environmental performance of a firm (Fernández, 2015).

This research finding specifies that some sampled hotels have reduced laundry detergent via reuses of towels in hotels and other hotel activities. They have also placed signs to encourage hotel guests to reuse towels. This research finding was similar to the finding made by Grant (2015) that hotels have placed cards in guestrooms that inform guests. The towels or sheets have not been washed to save the environment if they were not requested by hotel guests. According to Yusof and Jamaludin (2013), it showed that 100% of hotel operators have participated and encouraged guests to reuse towels and linens. According to Getz and Carlsen (2000), reuses of towels have been noted to satisfy their customers, and towel re-usage can be seen to hinder the guest's impression of a pampering experience (Deraman et al., 2017). Ying-Chang Chen and Yu-Ta Chen (2012) found out that the hotel has a discount for customers who have not changed towels.

#### **d. Air Quality Management in Hotels**

This research finding illustrated that most of the sampled hotels have created places for smoking, while other hotels have only posted signs saying "No Smoking." The smoking areas have been reserved for guests, including the verandas of the hotels and some of the assigned hotel floors. A similar research finding by Dearlooe, Bialous, and Glanantz (2002) and Mbasera (2015) suggests that smoking places should be created to mitigate its effect. According to Allen (2007), stressing the importance of a smoking place, as it can cause premature deaths and diseases (Mbasera, 2015).

The electronic materials and facilities of most hotels in this research have been checked to make sure that those materials are still in good condition and have installed facilities



to absorb air from rooms and hotels. Such good practices can comply with the Green Business Standard produced by ASEAN (2007) that air quality should be controlled.

Most hotels in this research have decorated green areas in their hotels, even though some hotels didn't have sufficient space for preparing green areas. The hotels that have large spaces have prepared many areas of green, while the hotels with small spaces for greening have tried decorating green buildings by growing flowers, trees, and setting up flowers. This effort found in this research can contribute to some parts of the standard produced by Ahn and Pearce (n.d.), which identified the landscaping and exterior environment in hotels as focused on parks or gardens with trees and plants, open space with trees and plants, and diverse colors and textures. Moreover, luxury hotels have more green spaces. The American Hotel and Hospitality Services (n.d.) set a standard for hotel green standards. Those criteria also focused on external areas. It was recommended that external areas include the appearance of grounds and gardens. Those areas are to be maintained in sound condition. Grounds and garden establishments could consider the use of materials that are in keeping with the local environment and the physical characteristics of the local geography and geology.

Some hotels in this research have set up and constructed buildings with green innovations, while several hotels have not had green buildings as they have set up before and it was costly to green building redesign. The finding was similar to the research finding conducted by OECD (2002) in Hotel Guestline Days in India that sun control films have been installed on all windows in public areas to get direct sunlight, and this sun control setup could reduce the hotel's air conditioning load and related costs. Moreover, energy-saving light bulbs have been equipped with dimmers in all public areas (OECD, 2002).

### **5.3.3. Green Employment and Local Economic Developments**

The hotels in this research didn't have the policy to recruit people who have knowledge of the green concept and promote them at the hotel management level. People with disabilities have not been recruited to work in many hotels. Hotel managers predicted that fewer people with disabilities would stay in hotels than people without disabilities due to high training costs, accommodating needs of people with disabilities (Gröschl, 2007; Hammett, 2003), limitations in multitasking skills, and potential mobility



restrictions that would negatively impact night and shift work (Gröschl, 2005, Gröschl, 2007; Stefan, 2011). The finding contrasts with Stefan (2011), who confirmed that more than 60% of the staff of a group of 15 independent German hotels were people with disabilities in hotel operations (Stefan, 2011). Green business knowledge has not been included in staff recruitment criteria. The majority of hotels do not have specific programs to increase the incomes of rural communities. The research findings disagreed with Sweeting and Sweeting (2003) that, for environmentally responsible hotels, hotels need to contribute to conservation and the natural environment serves as an attraction for tourism (Romppanen, 2010). Support from the hotel for conservation could minimize the risks of environmental problems (Sweeting & Sweeting, 2003; Romppanen, 2010). Local community development should be considered as it affects local people, and those people should be restricted from accessing natural resources like water and forest resources because their living areas could be destroyed by new infrastructure and hotel buildings. Strong relationships between hotels and local communities and buying local goods from local communities could generate publicity for hotels (Romppanen, 2010).

#### **5.3.4. Cultural Promotion and Environmental Awareness**

Few environmental activities and local cultural conservation initiatives were initiated by hotels. Most hotels have no activity in environmental protection. Few hotels have reported that they have sent guests to work with communities, and few hotels have engaged with communities directly and through CSOs. This finding contrasted with that of Sweetings and Sweeting (2003), which indicated that environmentally responsible hotels needed to consider the environment and the environment that could serve the tourism business.

#### **5.4. Efficiency and Effectiveness of GBSI in Hotels**

In this section, the correlation of green business-standard implements, or GBSI (independent variable) and dependent variables (water reduction, energy reduction, cost reduction, guest increase, and profit increases) was discussed and argued. The discussion of the results and agreement is elaborated on below.

The research has confirmed a positive correlation between GBSI (independent variable) and EE1 "water reduction." This is supported by Graci and Kuehnel's (2002) research



that indicated water consumption was reduced as a result of green practice. Their findings were that in the Holiday Inn on King in Toronto, Canada, the installation of low-flow showerheads and faucet aerators has saved Cdn \$14,852 per year (Graci 2002; Graci & Kuehnel, n.d.). In Spain, 880 liters were used by each person each day (Kazim, 2007; Ustad, 2010). Alexander (2002), cited in Ustard (2010), confirmed that the hotels that are based in San Antonio have implemented water conservation programs that result in a reduction of 396 gallons (1500 liters) to 100 gallons (378 liters) per guest in the first month of hotel operation.

The positive correlation of GBSI in hotels (independent variable) and EE2 "energy reduction" was confirmed by this research with the similar finding of Yusof & Jamaludin (2013) that green practices in hotels save energy usage, which leads to financial benefits. According to Gössling et al. (2005) and Graci and Kuehnel (n.d.), the average use of energy was 130 megajoules per bed per night. In hotels, energy was generally used more for visitors than for residents because the visitors used some facilities like bars, pools, and restaurants (Gössling et al. 2005; Graci & Kuehnel, n.d.). Another research found out that to promote clean energy, the solar energy system has been considered at a cost of \$1.4 million. This solar system could supply enough energy for hotels for up to 14 days without the sun to heat and cool properties (Graci & Kuehnel, n.d.). The installed in-room energy management system at The Holiday Inn in North Vancouver, British Columbia, has saved about \$16,000 annually. This means that the hotels' energy consumption was reduced by 28%. The system automatically adjusts individual room temperatures. The system was able to ensure a return on investment within 14 months (Green Lodging News, 2008; Graci & Kuehnel, n.d.). The amount of Cdn \$25,000 was invested by Fairmont Royal York in Toronto to set up a program for the replacement of leaky steam traps and fixing leaks. This program was able to save over CDN \$200,000 annually (Graci, 2002), as cited in (Graci & Kuehnel, n.d.). Another model was the roof solar energy system of The Comfort Inn and Suites in Red Deer, Alberta, which has reduced large energy costs (Graci & Kuehnel, n.d.).

Graci and Kuehnel (n.d.) confirmed the positive correlation between GBSI (independent variable) and EE3 "cost reduction" with a similar finding by Brebbia and Pineda (2004) that the implementation of the environments in hotels could reduce their energy consumption by 20–40% per hotel. Such energy reduction has not affected hotel performance. The Baltapest Hilton hotel in Hungary altered its light bulbs to be more



energy-efficient, which led to a reduction of the energy bill by 13%. This saved \$40,000 per year (OECD, 2002). Moreover, the OECD confirmed that the keycard installation saved the US \$0.30 per day per room. The payback period is 70 days (OECD, 2002). Another research conducted by Bohdanowicz and Hawkins (2011) found out that hotels saved 20% of energy via energy conservation and energy efficiency measures in hotel buildings (Halbe, 2013).

GBSI could significantly predict the EE4 "guest increase" in hotels. The research done by Thongkao (2002) in Phuket, Thailand was not sure whether the green practices in hotels would have a greater potential to attract customers and could contribute to an increase in customers or not. Few of the hotel guests demanded to stay in green hotels and they were required to run hotels with environmental protection and consideration.

GBSI could significantly predict the EE5 "profit increase" in hotels. This research finding could be proven by Brebbia and Pineda (2004), whose research revealed that environmental imitative implementation in hotels has provided significant financial benefits for hoteliers (Graci & Kuehnelt, n.d.). The hotels, where the cost of energy, water, and waste disposal was high, increased efficiency and reduced waste, which would be more cost-effective than their competitors (Graci & Kuehnelt, n.d.).

## **5.5. Influencing Factors of GBSI in Hotels**

This section discusses the results of the regression of influencing factors and green business-standard implementation in hotels. The discussion on the results was elaborated as below.

### **5.5.1. Customers' Support and GBSI in Hotels**

This research confirmed that the customers' support influenced the degree of GBSI in hotels. The significance of the prediction was contributed by two variables: IF1.3: "customers' knowledge of green tourism" and IF1.4: "customers' loyalty." But IF1.1: the customers' willingness to pay extra payments and IF1.2: the customers' knowledge of green growth could not predict the degree of GBSI in hotels.

In this study, the prediction of IF1 "Staff Support for GBSI in Hotels" and GBSI in Hotels also supports the research of Yusof and Jamaludin (2014). Their study concentrated on the barriers of Malaysian Green Hotels and Resorts, with three hotels



and two resorts in Malesia. The managers of the hotels revealed that the guests strongly supported green practices in hotels. Hotel B's manager suggested that 90% of the hotel guests were satisfied with their green operation.

The study was IF1.3 "Customers' Knowledge of Green Tourism," which was a predictor of GBSI in hotels. This research also proved the research of Ying-Chang Chen and Yu-Ta Chen (2012). Their research was conducted with hotel managers in Taiwan. The research confirmed that when people were aware of environmental ideas, their willingness to choose green hotels would increase. The government should try harder to promote knowledge of the environment for people and customers. The guidance of environmental protection depends on customers' perceptions and acceptance. If they were aware of environmental knowledge, they would come back to stay in hotels. Besides government efforts, hotels have produced some materials on environmental issues and placed them in guestrooms. This approach would enable customers or guests to get first-hand knowledge of the environment as well.

In this research, the prediction of IF1.4 "loyalty of customers in staying at my hotels" and GBSI ("green business-standard implementation") in hotels was positively significant. This research was also proved by Manaktola and Jauhari (2007), who researched the National Capital Region of Delhi, Gurgaon, and Noida in India. The research focused on exploring consumer attitudes and behavior towards green practices in the lodging industry in India. The research has confirmed that guests were willing to stay and support green hotel initiatives. It found that people's environmental knowledge had a significant effect on hotel guests' decisions in choosing hotels (Laroche et al., 2001).

Ying-Chang Chen and Yu-Ta Chen (2012) showed that the acceptance of customers and perceptions of green and environmental issues could guide hotels to promote the effectiveness of environmental protection. For example, with the same price rates as the hotel rooms, customers could easily recognize the hotel's effort and gain more knowledge about the green hotel. The knowledge of green could encourage guests to come back again next time. The environmental protection notes should be kept inside rooms so that they can increase awareness of environmental protection for customers.



MF1.2 "customers' knowledge of green growth" and GBSI "green business-standard implementation in hotels" were not associated. The research findings disagreed with the research of Hieu and Rasovská (2017), which indicated that insufficient knowledge of environmental strategies in businesses can be a barrier to green implementation (Gossling et al., 2002; Barnes, 2007; Tzschentke et al., 2008). Lack of human resources capabilities was another barrier to green implementation, and those capacities were related to knowledge and skills (Ebinger et al., 2006; Del Brio et al., 2008). A lack of professional advice on environmental practices were identified, especially in developing countries in ASEAN (Visvanathan & Kumar, 1999). This research finding contrasted with another research finding which revealed that customers were the most influential on green practice (Deraman et al., 2017) because most hoteliers valued their guests more than anything else (Barnes, 2007; Han et al., 2011; Sloan et al., 2004; Stark, 2009). Deraman et al. (2017) confirmed that many people/consumers have started to be more aware of the environment and have begun caring for it. Consumers with green knowledge could influence their purchase behavior and preferences when choosing a hotel. Hotel guests would prefer green hotels as their attitudes were toward green and eco-friendly hotels, and they had the intention of preserving the environment. Hotel managers should share some of their benefits with customers to encourage them to adopt green practices. For example, hotels can discount a certain amount of money for hotel guests who actively participate in green practices in hotels (Han et al., 2011).

IF1.1 "willingness of customers to pay extra for green practices" and GBSI "green business-standard implementation in hotels" were not associated. This research finding contrasts with the research of Serlen (2008) that found consumers' attitudes are strongly related to their positive intentions to pay more for green products and services (Deraman et al., 2017).

This research also agreed with the research of Butler (2008) that confirmed that many hotels were not sure about additional payments from customers for green practices and had been waiting for an increase in demand from customers before implementing full green practices in their hotels (Deraman et al., 2017).

Barsky (2008) found that hotels that have improved environmental programs have been recognized by customers, and green program options or initiatives have been accepted by guests with different perceptions. The hotel guests who were looking for cheap hotel



rooms were less attracted to green practices in hotels, and they were less aware of green programs in hotels (Deraman et al., 2017).

Luxury hotel guests could take part in the green programs as they could pay a little extra money to contribute to environmental preservation. Kirk (1995) and Deraman et al. (2017) specified that hotels had concerns about the reluctance of customers to pay extra money for environmental programs. The contrasting finding of this research was that, likewise, Tsen et al. (2006) indicated that consumer attitudes toward the environment influence customers' choice and willingness to spend their pennies on green products..

### **5.5.2. Government Regulation' Support and GBSI in Hotels**

This part discusses government regulation support and the implementation of green business standards in hotels. Multiple regression revealed that government regulation support could influence the implementation of green business standards in hotels. This significant prediction of GBSI in hotels was contributed by IF2.2, IF2.3, IF2.4, and IF2.5.

IF2.2 "green growth policy" predicts positively green business-standard implementation (GBSI) in hotels. The research proofed by Thapa (2013) indicated that green standards were implemented in hotels to meet legal compliance (Hieu & Raovská, 2017). Y.C. Chen and Y.T. Chen (2012) revealed that a lack of understanding of hotel managers on policy could cause difficulties in implementing the policy. The government's guidance, rewarding system, and consultation were important to promoting the idea of environmental protection. The concerns were that laws and policies could not be carried out properly and those needed to be supported by the government. The government needs to build up government standards and certify green hotels. Alonso-Almeida and Rodriguez-Antón (2011) declared that legal instruments have also been pressed for environmental practices in hotels and regulations in these green hotel sectors have been created to exert more influence on hotels to adopt environmentally friendly behavior (Bagur-Femenias et al., 2016).

IF2.3 "green growth strategy" could predict positively GBSI "green business-standard implementation" in hotels. The research finding was proved by the research of Yusof and Jamaludin (2014) conducted in Malesia, which proved that Hotel C and Resort A agreed that lack of government support and enforcement was also a barrier for green



implementation and they had not received any support from local authorities. But other hotels confirmed that the governments were supportive of green programs and practices. Ying-Chang Chen and Yu-Ta Chen (2012) mentioned that the thought of the strategy would increase the hotel's operation cost as most hotel owners or managers do not understand its benefits from green practice. Governments should allocate funds or exempt taxes to encourage hotels to set up the software and improve the software. This approach could make it clearer for hotel managers about policy implementation.

IF2.4 "green tourism" can positively predict GBSI "green business-standard implementation". Lee et al. (2016) identified green tourism as being important for the future development of tourism. Many drivers were influenced by green tourism. Green tourism, which is also called ecotourism, consists of a wide range of conditions and standards.

IF2.5 "social actions toward green practices" can positively predict GBSI "green business-standard implementation" in hotels. This research finding agreed with the research done in Malaysia by Yusof and Jamaludin (2014), which indicated that there was no problem in networking with green vendors and suppliers in Malaysia. But the research indicated that only resort A has difficulties finding green suppliers due to resort locations that are far from the mainland. Bagur-Femenias et al. (2016) stated that social actions like social awareness of environmental issues have led organizations to alter their attitudes towards environmental protection. The positive changes of many organizations have been identified from a reactive position of addressing environmental inefficiencies to proactive environmental behaviors that enable competitive advantages. Weng et al. (2015) declared that stakeholders have also been pressured on decisions and consideration of green business-standard implementation. Green business-standard implementations come from customers, local society, employees, suppliers, and competitors (Bagur-Femenias et al., 2016).

### **5.5.3. Benefits from GBSI in Hotels**

The perceived benefits of GBSI in hotels could predict the degree of GBSI in hotels. The degree of GBSI in hotels was contributed by IF3.1: "Cost Reduction" and IF3.2: "Hotel Image Enhancement."



This study supported some studies confirming that the cost reduction could affect GBSI in hotels. Hieu & Raovská, (2017). Bergmiller and McCright (2009) confirmed that cost reduction could be a factor for green practice (Hieu & Raovská, 2017). Mbasera, Plessis, Saayman, and Kruger (2016), who researched eight hotels in Zimbabwe and South Africa, argued that the implementation of green management initiatives reduced the cost through saving resources. Ying-Chang Chen and Yu-Ta Chen (2012) studied the cases of current green hotels in Taiwan. Their study proved that green management in hotels could lead to savings in operational and societal costs.

Another research which was conducted with hotels in Germany and Peru found that as a part of sustainable tourism practice, waste management would contribute to the cost reduction of hotel operations through the four Rs (Reuse, Reduce, Recycle, and Recover) as the most effective in waste management (Sloan et al., 2009). Ustad (2010), which was conducted with the managers of hotels in New Zealand, indicated that 63% of hotel managers regarded the adoption and implementation of the environmental management system (EMS) as having potential cost-saving benefits.

This research was found in parallel with Kirk (1995), who conducted research with general managers of the hotels in the city of Edinburgh. His research suggested that hotels should start with simple and low-cost projects that could be implemented by staff, and that hotels can implement green projects or practice without concern about the cost if those hotels have strong financial strength (Deraman et al., 2017).

The cost could influence the degree of GBSI in hotels. This finding disagreed with research done by Vernon et al. (2003) that identified that cost was also an obstacle to green practice (Deraman et al., 2017).

This research finding contradicted another study that found that implementing green was financially stressful because hotels had to pay high certification fees in order to obtain eco-certification (Hirschland, Oppenheim, & Webb, 2008; Deraman, Ismail, Arifin, & Mostafa, 2017). Another research that contrasted this research was the research done by Fukey and Issac (2014) that found the green practice was that hotels needed to buy certified green products that required a huge investment (Deraman et al., 2017).



The research findings were similar to those done by Satchapappichit et al. (2013). The research focused on factors influencing the adoption of green practices by small and medium-sized hotels in Thailand. The finding of their research was that the hotels in Phuket and Krabi in Thailand have applied green practices. The multiple regression results confirmed that the variable "cost" could not predict the adoption of green practices in hotels.

This research also found out that MF11 "hotel image enhancement" can positively predict GBSI "green business-standard implementation" in hotels. According to Bergmiller and McCright's (2009) research, hotel image improvement is a motivating factor for green practices in hotels (Hieu & Raovská, 2017). Ying-Chang Chen and Yu-Ta Chen (2012) agreed that green practices in hotels could increase hotel reputations, popularity, and brand effect. Hotels could reach the standard of green hotels and contribute to the strength of their competitiveness towards environmental protection and highlight their features. The study also stressed that environmental implementation in hotels was vital to maintaining hotel images, and the study also stressed that environmental practice in hotels could improve the images of hotels (Bagur-Femenias et al., 2016).

#### **5.5.4. Hotel Managers/Owners' Attitude for GBSI in Hotels**

This part discusses the influencing factors of the hotel managers' or owners' attitudes and GBSI in hotels. This research finding was that the hotel's managers' or owners' attitudes could predict the degree of GBSI in hotels. The degree of GBSI in hotels was predicted by the hotel managers' knowledge of green growth policies, green growth strategies, and green tourism, and the recognition of hotel managers/owners' knowledge of green growth could contribute to the degree of GBSI in hotels.

The research findings were similar to those done by Satchapappichit et al. (2013). Their research focused on factors influencing the adoption of green practices by small and medium-sized hotels in Thailand. The finding of their research was that the hotels in Phuket and Krabi in Thailand have applied green practices. The multiple regression to examine the hotel managers' attitude to the adoption of green practices in the hotels found that the adoption of green practices in the hotels was influenced by the hotel owners' or managers' attitude toward the environment  $\beta = 0.201$ ,  $p < 0.05$ ).



The research findings supported another finding of the research conducted by Park et al. (2012) in the United States, which revealed that the hotel managers/owners' environmental attitudes could not influence directly the adoption of green practices in hotels, but the factor could influence indirectly the green practice implementation in hotels via advantages of green practices ( $B = .28, p < .01$ ).

This research finding proved the research finding of Halbe (2013), which indicated that the level of understanding of hotel managers about environmental issues and experience influenced their decision-making involved in green energy measures in the hotel.

Another study also confirmed that the hotel's green performance could be influenced by the understanding of management (Chan et al., 2014).

The research findings proved the research by Halbe (2013), which indicated that the level of understanding of hotel managers about environmental issues and experience influenced their decision-making related to green energy measures in hotels. Thuot et al. (2010) and Tzschentke et al. (2008) indicate that green practice in accommodation can be started by owners (Halbe, 2013).

#### **5.5.5. Staff Support and GBSI in Hotels**

This part discusses the relationship between staff support and green business-standard implementation in hotels. This finding was that staff support could predict green business practices in hotels. The staff's knowledge and interest contributed to the significance of the prediction.

The research findings disagreed with other research findings. The different staff had different perspectives towards sustainability because they felt that green practice measurement was an additional task for them and their workload. Such attitudes were local empowerment initiatives, efforts, and plans for resorts in Kota Kinabalu. The employees of the resorts were asked to voluntarily get involved in the effort of teaching and helping the local community to protect their local beach, but not many staff turned up on the program day, causing the event to be postponed until a later date. In this situation, it was difficult to involve the staff in the sustainability effort. The resort owners also said that rewards should be considered to motivate staff to join in green activities in hotels because some staff don't understand why they have to do extra work. There was a lack of awareness and also a lack of sustainability education in the school



curriculum and information through the media as the causes of poor attitudes among local people (Salehudin et al., 2013).

## **5.6. Summary**

The degree of GBSI in the hotel was scored at 2.66 for human resources and internal green practices, 3.87 for energy usage, 3.32 for water usage, 3.05 for waste management, 3.73 for air quality management, 2.60 for green product usage, 1.7 for the green business incentive (job opportunity), and 1.98 for environmental awareness for the local community and cultural promotion. These findings contrasted with some studies, including Yusof and Jamaludin (2014), and were supported by some studies such as Grant, (2015), Graci and Kuehnel (n.d.), Yusof and Jamaludin (2013), Moreo (2008), and Mbasera (2015).

GBSI's efficiency and effectiveness in hotels were scored at 3.79, 3.92, 3.27, 2.45, and 2.27, respectively, for water reduction, energy reduction, cost reduction, guest increase, and profit increase. The GBSI in hotels (independent variables) could predict five dependent variables, including EE1, EE2, EE3, EE4, and EE5. The research findings supported some studies.

Influencing Factors Affecting Green Business Standard Implementation in Hotels: Five parts were discussed: staff support, government regulation support, perceived benefits, management attitude, and staff support.

For Customer Support for GBSI in Hotels: Customers' Support could predict the degree of GBSI in hotels. This significant prediction of GBSI in hotels was from two variables: IF1.3: "customers' knowledge of green tourism" and IF1.4: "customers' loyalty." But IF1.1: the customers' willingness to pay extra payments and IF1.2: the customers' knowledge of green growth could not predict the degree of GBSI in hotels. This study supported some studies by Yusof and Jamaludin (2014) and Ying-Chang Chen and Yu-Ta Chen (2012) that customers' or people's knowledge could drive green practice in hotels.

The variable "the loyalties of customers to staying at my hotels", which could predict GBSI ("green business-standard implementation"), is evidenced by the amount of



research done by Manaktola and Jauhari (2007) and Laroche et al. (2001), which confirmed that guests are willing to stay and support green hotel initiatives.

For Government Regulation Support: "the government regulation support" could predict the implementation of green business standards in hotels. IF2.2 "green growth policy," IF2.3 "green growth strategy," IF2.4 "green tourism," and M2.5 "social actions toward green practices" could predict the degree of GBSI in hotels. This finding proved the studies of Thapa (2013), Hieu and Raovská, (2017), Ying-Chang Chen and Yu-Ta Chen (2012), Alonso-Almeida and Rodriguez-Antón (2011), and Bagur-Femenias et al. (2016).

Perceived Benefits: The degree of GBSI in hotels could be predicted by the perceived benefits of GBSI in hotels. IF5.1: "Cost Reduction" and IF5.2: "Hotel Image Enhancement" can predict the GBSI in hotels. This study supported some studies confirming that cost reduction could predict the degree of GBSI in hotels. This research also proved some studies regarding cost reduction that influenced green business-standard implementation, done by Bergmiller and McCright (2009); Hieu & Raovská, (2017); Mbasera et al. (2016); and Ying-Chang Chen and Yu-Ta Chen (2012). Research should be started with a simple and low-cost project, Kirk (1995; Deraman et al. (2017). But this research disagreed with Vernon et al. (2003) that cost was also an obstacle to green practice and that there was financial stress for green practice in hotels (Hirschland et al., 2008; Deraman et al., 2017) that were faced with financial stress for green practice in hotels.

Hotel Managers/Owners' Attitude for GBSI in Hotels: Hotel managers/owners' attitude could predict the degree of GBSI in hotels influenced by hotel managers/hotel owners' knowledge of green growth policies, green growth strategies, and green tourism, and the recognition of hotel managers/owners on green growth could contribute to a degree of GBSI in hotels. The research findings were similar to the research done by Satchapappichit et al. (2013); Park and Kim (2012); Halbe (2013); and Chan et al. (2014).

Staff Support for GBSI in Hotels: "staff support" could predict green business practice in hotels. This research disagrees with other research that found staff had different



perspectives towards sustainability because they felt that green practice measurement was an additional task for them and added to their workload.



## **CHAPTER SIX**

### **CONCLUSION**

#### **6.1. Introduction of the Chapter**

The section aims to conclude the research findings with seven parts: the introduction of the chapter, main research findings, expected results, implications of the study, limitations of the study, recommendation, and future research and summary of this chapter.

#### **6.2. Main Findings**

It is concluded that (1) the extent of green business-standard implementation: hotels have applied green business standards in most parts of energy-saving, water-saving, waste management, and air quality management. But their implementation of green business standards in hotels was still limited to green product usage and human resource and internal practice. The very low degree of green business-standard implementation was green products and job opportunities for local people.

The GBSI in hotels could contribute to the degree of scores in water reduction, energy reduction, cost reduction, guest increase, and profit increase. In the comparison of those five benefits from green practice, green implementation in hotels has provided more benefits for energy reduction through energy-saving device usage. Energy reduction and cost reduction have been identified as the main benefits of green business-standard implementation. The low benefits of implementing green business standards were an increase in guests and profits.

"The customers' support" could influence the implementation of the Green Business Standard in hotels. Customer support that could predict green business practices in hotels included customer knowledge of green tourism and customer loyalty. Secondly, "government regulations' support", including green growth policy, green tourism, green tourism, and social action on the green, could affect the degree of GBSI in hotels. Thirdly, "perceived benefits," including cost reduction and hotel reputation enhancement, could enable hotel owners and managers to apply green business standards in hotels. Fourth, "the hotel managers' or owners' attitude" could influence



GBSI in hotels. Those variables included hotel managers' or owners' knowledge and recognition of green practices and green values.

### **6.3. Unexpected Results**

In the research, there were three objectives: the degree of green business-standard implementation in hotels; efficiency and effectiveness of GBSI in hotels; and influencing factors for GBSI in hotels. Of those objectives, there are some findings on the research objective. There was one difference between this finding and the others. Few hotels have sent their staff to work with rural communities. Rain storage was used in very few hotels. Many hotels have not reused used water. Solar power was used in some hotels. No hotel treats water before discharging it into rivers or the sea. Left over food was not processed for other purposes. The majority of hotels have no environmental protection activities. In addition, people with disabilities have not been recruited to work at hotels that have not been included in previous studies.

### **6.4. Implication of the Study**

The research is important for hoteliers, communities, departments, ministries, Sustainable Development Goals (SDG), COP-26, and green finance. Hoteliers could use the research findings to develop and implement their plans to improve green practices in hotels. Local communities can use it to produce green organic products and promote collaboration with hotels to supply their products to meet hotel needs. The departments of tourism and the environment can use this to set up their plans and strategies to improve and support hoteliers to implement the green standard in hotels.

Policy-makers can use this research finding to develop policies that contribute to promoting the green practices of hotels in Cambodia and set up incentive systems to promote green practices in hotels in Cambodia.

The alignment of this research with the SDGs could help with climate action, organic food, and environmental protection (United Nations, 2021)<sup>a</sup>, global material footprint (UN, 2021)<sup>b</sup>, sustainable development of marine and ocean resources (UN, 2021)<sup>c</sup>, and forest, land, and biodiversity protection (UN, 2021)<sup>d</sup>.



Moreover, the research will contribute to COP-26, which has taken actions to achieve the goal of the Paris Agreement and the UN Framework Convention on Climate Change (UN Climate Change Conference UK 2021) and green finance (UNEP, 2021).

### **6.5. Limitation of the Study**

Some gaps were not included in this study. (a) Green business standards: There are no green building or green space standards. Air quality control was studied only with some material installations that could absorb air from outdoors to indoors. Chemical substance management was not included in the study. Green practices also focus on the reduction of emissions and pollution, but this has not been studied.

(b) The efficiency and effectiveness studied only some inputs, like the score of cost reduction, water reduction, and energy reduction, and the outputs concentrated only on guest increase and profit increase. The variables of productivity and quality were not included in this study.

(c) This study excluded some influencing factors that influenced green business-standard implementation, such as competitive advantages, socio-cultural context on leadership, and organizational innovation. Some external and internal factors were not included in the study. (d) The data was mostly quantitative. There is less information about the research's qualitative data.

(d) The information in this research was gathered from the perceptions of hotel managers and hotel owners, tourism department officials, and people who have experience staying at hotels.

### **6.6. Recommendation and Future Studies**

To increase the extent of green business-standard implementation in hotels and increase the motivation for hoteliers to apply green business standards, some recommendations are elaborated below.

To increase the amount of green development information available in hotels, ministries and CSOs collaborated to develop information about environmental practices, green growth, and green development and encourage hotels to access that information. Another option is that the facilities should be available at hotels so that hotel guests



could access any information, including green practice, online. This made it easier for hotel guests to access information. Another benefit can be reduced paper usage in hotels, which can contribute to environmental impact reduction.

to encourage hotels to work with local communities so that they can contribute to the improvement of the livelihoods of rural communities, in particular indigenous people. There should be an increase in collaboration between hotels and local communities, in particular, community forestry, community fishing, and community-protected areas to work collaboratively to support poor indigenous communities. Hotels should develop clear action plans and strategies to promote green and environmental initiatives in their hotels. Hotel staff should be assigned to be responsible for green business-standard implementation. Hotels should reserve some budget for corporate social responsibilities. Most of the sampled hotels have not reserved a specific budget for environmental promotion and conservation. But they have also supported some budgets for provincial departments of tourism when they organize some events like a clean city, etc., environmental competition.

To reduce energy usage, three points should be improved. Solar panels should be encouraged for use in hotels. RGC has a plan to generate energy from alternative energy at a very low level in comparison to other sources. RGC should increase the percentage of energy sources from renewable energy. Hotel guests should be encouraged to join in energy reduction efforts. Fans should be set up in some space or area where some guests would use fans in place of air-conditioner usage. The knowledge of the importance of solar systems should be introduced to hotel managers/owners to make sure that they understand the importance of particular economic and environmental benefits. Solar companies should be invited to explain the economic and environmental savings from updated facilities to hoteliers or hotel managers so that they can decide to buy the new version to set up in hotels.

The waste management system should be improved in some hotels. Water treatment facilities should be added and required in hotels. Food leftovers should be turned into organic fertilizers by hotels. If hotels don't want to process those into organic fertilizers, a collaboration between hotels and other companies that are experts in producing organic fertilizers from leftover food is needed. Most of the leftover food has been kept to be collected by companies that are responsible for rubbish collection. All of that



leftover food has been mixed with other solid waste. The garbage collection trucks should sort waste by type of hotel waste: solid, leftover food, and paper, and collaboration with a company that can process them is required. Hotels should increase recycling and solid waste sorting should be done by hotel employees. Hotel guests should be encouraged to reduce their use of some facilities and materials in hotels.

Air quality management in hotels should be improved. Some hotels have not been assigned smoking areas. Outside of the hotel, smoking was permitted, and some hotels had designated smoking and non-smoking areas near the hotel floors. The space for smoking should be prepared and reserved for hotel guests who smoke, and we should find a way to reduce the impact of cigarette smoking. This can reduce the impact of smoking on guests' health.

The usage of domestic and organic products should be improved in hotels. The connection between hotels and community-based organizations (CBOs) is important. CBOs who work on organic vegetables or meat that cannot impact hotel guests' health could supply meat or vegetables. NGOs play a role in facilitating the engagement between CBOs and hotels. Hotel organic meat and vegetables should be assessed. Then it should be discussed with CBOs on the supply capacities of vegetables and meat. NGOs can facilitate CBOs to develop clear plans to supply certified meats and organic vegetables to hotels.

Hotel job opportunities should be offered to local people who know green concepts and applications. Staff who have green knowledge should be prioritized in staff recruitment or staff promotion to the management level. Gender policies in hotels should be developed to encourage women to take leadership roles in hotels. A policy to promote people with disabilities should be developed. People with disabilities should be recruited to work in hotels or promoted to management levels.

Hotels should be encouraged to work with local communities to contribute to livelihood improvement and environmental conservation and protection. More than 500 community-based organizations (CBOs) work on environmental and livelihood improvement in target provinces. Hotels can work with existing CBOs to help them. Hotels should reserve some budget for these activities and have clear plans to work with local communities.



Hotel customer knowledge should be increased so that they can reserve and be willing to pay more for the value of environmental promotion in hotels. Customers' knowledge of green growth and green tourism should be expanded so that their demand leads to green implementation. of customers in hotels can occur around 50–60% of the time as a result of the combined factors of cleanliness, good service, location, and green practice. The loyalty of guests in hotels was rated as having less influence on the decision-making of hoteliers. Guests' knowledge of green issues in hotels should be provided to guests.

The national green growth roadmap, green growth policy, green growth strategy, green tourism, and social actions should be widely publicized and disseminated so that everyone is aware of their contents. Guests' and hoteliers' understanding of the value of green implications could influence the decisions of hoteliers or hotel managers on green business practices in hotels.

The law on organic products should be reviewed and adopted soon. Currently, there is no standard to follow up with organic product producers to make sure that they are organic or not. If the law is passed, it will help to ensure the organic product qualities that make hotels and hotel guests trust each other.

Hotels should develop green purchase policies. After they develop those policies, the hotels will identify the suppliers who take care of green and environmental promotion. With such an approach, hotels will have their partners supply green products and suppliers who take care of the environment.

Social media should be used to contribute to promoting green practices in hotels in Cambodia. It was reported that 6.8 million people used social media in 2018. Fuentes (2018) noted that the number of social media users grew from 4.8 million in 2017 to 6.8 million in 2018 (Fuentes). Social media can be used to spread out information and update any information on best practices for green hotels, policies for green growth, road maps for green growth, and the framework for green growth. Moreover, social media can be used to monitor the negative impacts of hotels on the environment. Journalists should build their capacities for green knowledge and green adoption in hotels. This capacity building for journalists could enable them to monitor and spread green growth information to citizens.



Further research should be done to explore the guest perception of green application payments on green practice, groundwater availability, availability of organic products (certified meats and organic vegetables) to be supplied for hotel operation, and the influence of social media to promote green standards in hotels.

### **6.7. Summary of the Chapter**

In summary, (a) hotels have saved energy, water, and air quality, but they are less concerned about green product usage, human resources, and internal practice. (b) Green practices in hotels reduce water energy use, cost, and increase guests' and profit. Eleven motive factors could predict GBSI in hotels, while three motive factors have not significantly influenced green business-standard implementation (GBSI) in hotels. Six barrier factors or predictors could significantly negatively predict the green business-standard implementation (GBSI) in hotels.

Some gaps were not included in this study. Some variables of green business standards were not included in the study. Moreover, some influencing factors were not included in the study.

The research findings are important for policy-makers to develop policies and strategies to promote green in hotels. Another important finding was that the research findings could be used by hoteliers to set up their strategies to promote green and attract customers. It was important for students and academia to understand the green approach and conduct future research on green practices in hotels.

Recommendations were produced, including encouraging hotels to work with local communities, reducing energy usage through solar panel consideration, improving waste management systems, air quality management, domestic products, and organic products; offering hotel job opportunities for local people; increasing customer knowledge; spreading knowledge of national policies and frameworks; passing the law on organic products; developing green purchase policies; promoting green practice through social media; and further research.



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## APPENDICES

### Annex 1: Questionnaire

*Dear Respective Hotel Managers/representatives;*

*I am Por Narith, a student of The University of Cambodia (UC). I am conducting a research to complete my DBA study. The proposed topic is “Adoption and Implementation of Green Business Standard in Hotels: Case Study in Cambodia”. The questionnaire consists of four main parts: general information, efficiency, effectiveness of green business standard implementation, and motive factors for green business standard implementation and constraints for green business standard implementation in hotels. I am pleased to request you to fill the information as detailed in the questionnaire. Your responses are very helpful and are used only for this research purpose. Your responses and name will be confidential. In case you have any questions, please contact me via 012371003 or [narith\\_por01@yahoo.com](mailto:narith_por01@yahoo.com). Thanks for your valuable time to fill the information in the questionnaire.*

#### I. Demographic Information

##### 1. Respondents' Information

Code	No need to be filled
Name	
Sex	1= male, 2= female
Position	1= Owners, 2= Managers, 4= Others, please specify.....
Age	1= 16-20 years old, 2= 21-30, 3=31-40, 4= 41-50, 5= 51-60, 6= 61 or over
Education	1= Primary school, 2= Secondary school, 3= High school, 4= Bcheclor, 5= Master, 6= Doctoral degree and 7= other

##### 2. Hotels and Staff

When has your hotel started?		Fee charge a room a night in USD	
Is the hotel owned or rented? 1= Owning, 2= Renting		Where is the hotel located? (1= Siem Reap, 2= Phnom Penh, 3= Battambang, 4= Koh Kong, 5= Kampot, 6= Kep, 7= Kratie	
Numbers of rooms		Numbers of staff	
Numbers of room with 1 bed		Numbers of women staff	
Numbers of room with 2 beds		Numbers of guests a year	
Numbers of room with 3 beds		Numbers of Cambodians 'guests a year	
Is there swimming pool? (1=yes, 2=no)		Numbers of foreign guests a year	
How many swimming pools are there?		Are there restaurants in hotels? 1= yes, 2= no	
What level is your hotel classed? (1= star 1, 2= star 2, 3= star 3, 4= star 4, 4= star 5 and 6= not classified, 7= others, please			



specify...			
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## II. Dimensions

### Section 1: Hotels Green Implementation

*The statements below concentrate on the level of application of green in hotels. Please state your level of agreements on the statement from 1 to 5 that represents (1= strongly disagree, 2= Disagree, 3= Undecided, 4= Agree and 5= strongly agree)*

Statements	1	2	3	4	5
<b>1. Human resource and internal green practices</b>					
1. The information on environmental practice is available for guests.					
2. The staff member has been assigned to be in charge in environmental management.					
3. Hotel's staff members have been built their capacities on environmental protection.					
4. Staff members have been encouraged to join in environmental protection activities.					
5. The information of green growth and development has been posted at guest room and other (staff room, lobby, garden, etc.)					
6. Staff have been instructed to switch off all unnecessary devices (lamp, refrigerator, air-conditioner, TV, etc.) after cleaning the room or after guests have left rooms.					
7. Staff have been sent to work with local communities (authorities, NGOs, other parties)					
8. My hotel has participated in any environmental awards competitions.					
9. My hotel has participated in any green award competition.					
10. The budget has been allocated yearly in the budget for CSR and nature conservation.					
11. The hotels have allocated budgets for implementing green business standard.					
<b>2. Environmental Protection</b>					
<b>a. Effective Energy Usages</b>					
12. Staff have been trained on energy saving.					
13. Energy efficient devices (light bulbs) have been used at guest room and other (staff room, lobby, garden, bar/lounge etc.)					
14. Motion sensors have been used to conserve energy at guest room and other (staff room, lobby, garden, bar/lounge etc.)					
15. Solar panels have been installed at hotels for hot water heaters and other purposes at guest room, toilet, staff room, lobby, garden, bar/lounge etc.)					
16. The mirrors have been installed with windows in order to get lights in that reduce using energy.					
17. Energy-saving-air conditioners have been used at guest					



room and other (staff room, lobby, garden, bar/lounge etc.)					
18. Guests have participated in energy conservation by setting air-conditioner at around 24°C or higher.					
19. Fans have been installed to be used in open areas (lobby, lounge, etc.)					
20. Gas/solar has been used to instead of fossil fuel in the boiler system					
21. Timers (a device installed for setting time) have been used to control the duration of electric appliances such as air-conditioners, fans and lamps in certain areas of the hotel at guest room and other (staff room, lobby, garden, bar/lounge etc.)					
22. Key card slots have been used to activate energy in the guest rooms.					
23. Double glassed windows have been used to reduce heat from sun and noise from outside.					
24. Guests have been encouraged to participate in energy conservation by switching off electrical items (lamps, TV. etc.) before leaving the room or when not using it.					
25. Signs for encouraging guests for saving energy have been available at hotel rooms.					
<b>b. Effective Water Usages</b>					
26. Hotels' staff have been trained on water saving that can help maintaining our environment.					
27. Saving water toilets (less than 2.5 litter used once) have been installed in guestrooms, restaurants, staff rooms, lobby...etc.					
28. Water saving sink aerators (shower head) have been used at in bathrooms or other areas (staff, lobby, swimming pool)					
29. Rain water has been stored and used in hotels or for watering gardens and laundry to reduce the uses of water extracted from rivers or ground.					
30. Used water have be recycled and used for watering garden flower and trees.					
31. Guests have been encouraged to participate in water conservation by reducing water consumption (putting guides or stickers, etc.)					
32. Signs and letters for encouraging guests for saving water have been available at hotel rooms.					
<b>c. Waste Management</b>					
33. Facilities (bins to store solid waste) have been available to manage solid waste.					
34. Water treatment facilities are available at hotel to treat used water.					
35. Food leftover or garden wastes have been turned into organic fertilizer.					



36. Disposed solid objects such as (broken furniture, wood, wine bottle, trunk and etc.) have been recycled and reused.					
37. Solid waste have been sorted and placed by bins categorized into kitchen waste, paper, glass, plastics, aluminum cans etc.)					
38. Recycled papers have been used for consumption in hotels.					
39. Recycling and solid waste sorting programs have been educated for staff and guests.					
40. Usages of laundry detergent (powder) have been reduced by encouraging guests to reuse linen and towels during their staying.					
<b>d. Air Quality Management</b>					
41. Smoking and non-smoking areas have been organized for guests.					
42. All equipment and facility of hotels have been checked to ensure the good quality of atmosphere like regularly checking and maintaining the air-conditioner.					
43. Air absorbing machines have been equipped at hotel to ensure the good quality of atmosphere like taking away the bad smell					
44. Green spaces (garden, open spaces) were available in hotels, restaurants.					
45. Green hotel buildings have been designed and constructed (mirrors used at roofs, windows, and walls to get light in) that reduced the use of electricity.					
<b>3. Promoting green product usage and local economic development</b>					
<b>a. Green product usages</b>					
46. Domestic good quality organic/natural ones such as such as food and meat have been used by hotels.					
47. Domestic good quality organic/natural ones such as vegetable, fruit have been used by hotels.					
48. Domestic good quality organic/natural ones such as souvenir as well as other materials in hotel have been used by hotels.					
<b>b. Green Incentives (Job Opportunities of Green Business)</b>					
49. Local people who have knowledge of green business have been employed as operational staff.					
50. Local people who have knowledge of green business have been employed as management staff.					
51. Equal employment opportunities have provided (Ex: for those with disabilities)					
52. Business opportunities in hotel or guest related activities have been provided for locals (Ex: tour guides, cultural shows, etc.)					
53. There have been activities to improve the living condition					



of people in local community.					
54. Hotels have policies to recruit people who have knowledge of green business.					
55. Hotels have policies to promote staff members who have knowledge of green business.					
<b>c. Environmental awareness for local communities and local cultural and traditional promotion</b>					
56. Local communities have been educated on environmental protection by or with the support from hotels.					
57. Guests have been encouraged to participate in local customs and traditions (dances, sports).					
58. Hotels have engaged directly and/or with other parties (CSOs) to help local communities (in cash or kind).					

## Section 2: Efficiency and Effectiveness

*The statements below concentrate on the level of efficiency and effectiveness of green business standard implementation in hotels. Please state your level of agreements on the statement from 1 to 5 that represents (1= strongly disagree, 2= Disagree, 3= Undecided, 4= Agree and 5= strongly agree)*

<b>Efficiency and effectiveness statements</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
59. Green business standard implementation in my hotel has reduced water.					
60. Green business standard implementation in my hotel has reduced energy.					
61. Green business standard implementation in my hotel has reduced the cost for hotel operation.					
62. Green business standard implementation in my hotel has increased guests.					
63. Green business standard implementation in my hotel has increased profits.					

*Please answer the questions below*

<b>Questions</b>	
<b>Energy usages</b>	
64. How many KWh of electricity do you use a month in your hotel?	
65. How many KWh of electricity have you saved/reduce a month due to green business standard implementation in your hotel?	
<b>Water usages</b>	
66. How many cubic of water do you use a month?	
67. How many cubic of water have you saved/reduce a month due to green business standard implementation in your hotel?	
<b>Waste</b>	
68. How many kilograms of waste do your hotel produce a month?	
69. How many kilograms of waste has your hotel reduced a month due to	



implementation of business standard in your hotel?	
<b>Costs</b>	
70. How much (USD) does your hotel cost for implementation of green business standard in hotels a year?	
71. How much (USD) does you hotel save a year from implementation of green business standard in your hotel?	
<b>Guest</b>	
72. How many guests stay at your hotel a month?	
73. How many guests have increased a month due to the implication of green business standard in your hotels?	
<b>Profit</b>	
74. How much profit (USD) have you earned a year from the implementation of business standard in your hotel?	

75. How has the green business standard implementation in hotels increased resource efficiency? Please give an example.....

.....

.....

### Section 3: Motive factors

*The statements below indicate the factors which motivate for green business standard implementation in your hotels. Please score to show your agreement on the statement below and the numbers are from 1 to 5 that represents (1= strongly disagree, 2= disagree, 3= undecided, 4= agree and 5= strongly agree)*

<b>Motive factors for green business implementation</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
76. The willing of customers in extra payments for green practices has encouraged me to apply green standard in my hotel.					
77. Customers' knowledge on green growth has encouraged me to apply green standard in my hotel.					
78. Customers' knowledge on green tourism has encouraged me to apply green standard in my hotel.					
79. Loyalties of customers in staying at my hotels have encouraged me to apply green standard in my hotel.					
80. National green growth roadmap has motivated me to implement green business standard in my hotel.					
81. Green growth policy has motivated me to apply green business standard in my hotel.					
82. Green growth strategy has motivated me to implement green business standard in my hotel.					
83. Green tourism has motivated me to implement green business standard in my hotel.					
84. Social actions (environmental campaign...etc.) toward green practices have encouraged/pressured me to apply					



green standard in my hotel.					
85. Cost reduction has encouraged me to apply green business standard in hotels.					
86. I have implemented the green business standard in my hotels due to my hotel image enhancement.					

87. How have motive factors stated above encouraged applying green business standard in your hotel? Please give me an example.....

.....

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*Please answer the questions as below*

88. How many percent of guests are willing to pay extra for green practice?	
89. How much (USD) each of the guests could pay extra money for green practice?	
90. How many percent of guests have come to stay at your hotels due to green practices in your hotel?	

#### **Section 4: Barriers**

*The statements below indicate the factors which challenge for you to apply green in your hotels. Please score to show your agreement on the statement below and the numbers are from 1 to 5 that represents (1= strongly disagree, 2= agree, 3= undecided, 4= agree and 5= strongly agree)*

<b>Barrier factors for green business implementation</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
91. Lack of knowledge of hotels' owners or managers on national green growths roadmap have challenged for implementing green business standard in hotels.					
92. Lack of knowledge of hotels' owners or managers on green growths policy have challenged for implementing green business standard in hotels.					
93. Lack of knowledge of hotels' owners or managers on green growths strategy have challenged for implementing green business standard in hotels.					
94. Lack of knowledge of hotels' owners or managers on green tourism was a constraint for me to implement green business standard in my hotel.					
95. Lack of knowledge of hotels' owners or managers on instruction/Prakas on hotel and accommodation management was a constraint for me to implement green business standard in my hotel.					



96. Additional cost for green improvements (ex. modifying building to be green) have challenged for green business standard implementation in my hotel.					
97. Un-recognition of the importance of green business standard have constrained for green business standard implementation in my hotels.					
98. Additional labor cost to hire staff to be in charge in green practice have constrained for implementing green business standard in my hotel.					
99. Lack of knowledge of employee on green standard have constrained for implementing green standard in my hotel.					
100. Un-interest of staff in green business standard implication have challenged for me to apply green business standard in my hotel.					

101. How have factors mentioned above constrained for implementing green business standard in your hotel? Please give an example .....

.....

102. Have you got any recommendation to improve the green business standard implementation in hotels?

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I would like to express my profound thanks for your valuable time to fill the information in my questions. I would wish you success in your work.

----END----



## ឧបសម្ព័ន្ធ 1: កម្រងសំណួរ សូមគោរពលោកប្រធាន

ខ្ញុំបាទឈ្មោះ ប៉ៅ ណារីថ ជានិស្សិតនៃសាកលវិទ្យាល័យកម្ពុជា (UC) ។ ខ្ញុំកំពុងធ្វើការស្រាវជ្រាវដើម្បីបញ្ចប់ការសិក្សាថ្នាក់បណ្ឌិតផ្នែកការគ្រប់គ្រងធុរកិច្ច។ ប្រធានបទស្រាវជ្រាវ "ការអនុវត្តស្តង់ដារពាណិជ្ជកម្មបែតងនៅក្នុងឧស្សាហកម្មសណ្ឋាគារ" ។ កម្រងសំណួរមានផ្នែកសំខាន់ 4 គឺ៖ ព័ត៌មានទូទៅ ប្រសិទ្ធភាព ប្រសិទ្ធផលនៃការអនុវត្តស្តង់ដារអាជីវកម្មពាណិជ្ជកម្មបែតង កត្តាជំរុញសម្រាប់ការអនុវត្តស្តង់ដារអាជីវកម្មបែតង និងឧបសគ្គសម្រាប់ការអនុវត្តស្តង់ដារអាជីវកម្មបែតងនៅក្នុងសណ្ឋាគារ។ ខ្ញុំសុំការអនុញ្ញាតស្នើសុំ លោកប្រធាន/តំណាងសណ្ឋាគារ ជួយក្នុងការបំពេញព័ត៌មានដូចដែលមាននៅក្នុងកម្រងសំណួរ។ ចំពោះទាំងនេះមានសារៈប្រយោជន៍ខ្លាំងណាស់ និង ត្រូវបានប្រើប្រាស់សម្រាប់តែគោលបំណងនៃការស្រាវជ្រាវនេះប៉ុណ្ណោះ។ ការឆ្លើយតបនិងឈ្មោះរបស់អ្នកឆ្លើយនឹងត្រូវបានរក្សាការសម្ងាត់។ ក្នុងករណីអ្នកមានសំណួរ សូមទាក់ទងមកខ្ញុំបាទតាមរយៈ 012371003 ឬ narith\_por01@yahoo.com ។ សូមអរគុណចំពោះការចំណាយពេលវេលាដ៏មានតម្លៃរបស់លោកប្រធានដើម្បីបំពេញព័ត៌មាននៅក្នុងកម្រងសំណួរខាងក្រោមនេះ។

### I. ព័ត៌មានប្រជាសាស្ត្រ

#### 1. ព័ត៌មានរបស់អ្នកឆ្លើយតប

លេខកូដ	មិនចាំបាច់បំពេញ
ឈ្មោះ	
ភេទ	1 = បុរស 2 = ស្រី
តួនាទី	1 = ម្ចាស់ 2 = អ្នកគ្រប់គ្រង 4 = អ្នកផ្សេងៗ សូមបញ្ជាក់ .....
អាយុ	1 = អាយុ 16-20 ឆ្នាំ 2 = 21-30, 3 = 31-40, 4 = 41-50, 5 = 51-60, 6 = 61 ឬច្រើនជាង
កំរិតនៃការអប់រំ	1= បឋមសិក្សា 2= អនុវិទ្យាល័យ 3= វិទ្យាល័យ 4= បរិញ្ញាប័ត្រ 5= អនុបណ្ឌិត 6= បណ្ឌិត ផ្សេងៗ

#### 2. ព័ត៌មានអំពីសណ្ឋាគារនិងបុគ្គលិក

តើសណ្ឋាគាររបស់អ្នកចាប់ផ្តើមនៅពេលណា?	ថ្ងៃសេវាបន្តបន្ទាប់ក្នុងមួយឆ្នាំ .....ដុល្លារ	
តើអ្នកជាម្ចាស់ ឬ អ្នកជួលសណ្ឋាគារ? 1 = ម្ចាស់ 2 = ជួល	តើសណ្ឋាគារស្ថិតនៅឯណា? (1 = សៀមរាប 2 = រាជធានីភ្នំពេញ 3 = បាត់ដំបង 4 = កោះកុង 5 = កំពត 6 = កែប 7 = ក្រចេះ	
ចំនួនបន្ទប់	ចំនួនបុគ្គលិក	
ចំនួនបន្ទប់ដែលមានគ្រែ 1	ចំនួនបុគ្គលិកស្រី	







10. ថវិការបស់សណ្ឋាគារត្រូវបានប្រែប្រួលទុកជាទៀងរាល់ឆ្នាំសម្រាប់កម្មវិធីការទទួលខុសត្រូវសង្គម(CSR) និងការអភិរក្សធនធានធម្មជាតិ។					
11. សណ្ឋាគារបានវិភាគថវិកាសម្រាប់អនុវត្តស្តង់ដារអាជីវកម្មពាណិជ្ជកម្មនៅក្នុងសណ្ឋាគាររបស់ខ្លួន។					
<b>2. ការការពារបរិស្ថាន</b>					
<b>a. ការប្រើប្រាស់ថាមពលដោយប្រសិទ្ធភាព</b>					
12. បុគ្គលិកត្រូវបានបណ្តុះបណ្តាលអំពីការសន្សំថាមពលអគ្គិសនី។					
13. ឧបករណ៍សន្សំថាមពលអគ្គិសនី (អំពូលភ្លើង) ត្រូវបានប្រើនៅតាម បន្ទប់ភ្ញៀវ និង កន្លែងផ្សេងទៀត (បន្ទប់បុគ្គលិក, សួនច្បារ, ....។ ល។ )					
14. ឧបករណ៍បើក/បិទស្វ័យប្រវត្តិ (motion sensors)ត្រូវបានគេប្រើប្រាស់ដើម្បីរក្សា/កាត់បន្ថយការប្រើប្រាស់ថាមពលអគ្គិសនីនៅបន្ទប់ភ្ញៀវនិងបន្ទប់ផ្សេងទៀត (បន្ទប់បុគ្គលិក ជាដើម) ។					
15. បន្ទះថាមពលព្រះអាទិត្យត្រូវបានតំឡើងនៅសណ្ឋាគារដែលប្រើប្រាស់សម្រាប់ឧបករណ៍ទឹកក្តៅ គោលបំណងផ្សេងៗទៀតនៅបន្ទប់ភ្ញៀវ បន្ទប់ទឹក បង្គន់ បន្ទប់បុគ្គលិក សួនច្បារ ។ ល។					
16. កញ្ចក់ត្រូវបានដំឡើងនៅជាមួយបង្អួចដើម្បីអោយពន្លឺអាចចាំងចូលក្នុងបន្ទប់ដើម្បីកាត់បន្ថយការប្រើប្រាស់អគ្គិសនី។					
17. ម៉ាស៊ីនត្រជាក់ដែលប្រើប្រាស់ថាមពលតិចត្រូវបានប្រើនៅបន្ទប់ទទួលភ្ញៀវ និងបន្ទប់ផ្សេងៗទៀត (បន្ទប់បុគ្គលិក កន្លែងទទួលភ្ញៀវ ជាដើម) ។					
18. ភ្ញៀវបានចូលរួមក្នុងការកាត់បន្ថយការប្រើប្រាស់ថាមពលដោយកំណត់ម៉ាស៊ីនត្រជាក់ប្រហែល 24 អង្សា ឬ ខ្ពស់ជាងនេះ។					
19. កង្ហារត្រូវបានតំឡើងអោយប្រើនៅកន្លែងផ្សេងៗដូចជា កន្លែងទទួលភ្ញៀវ កន្លែងអង្គុយជាដើម) ដើម្បីកាត់បន្ថយការប្រើប្រាស់អគ្គិសនី។					
20. ឧស្ម័ន/សូឡា ត្រូវបានគេប្រើជំនួសឱ្យឥន្ធនៈហ្វូស៊ីលនៅក្នុងប្រព័ន្ធកំដៅ។					
21. ឧបករណ៍កំណត់ពេល (ឧបករណ៍ដែលបានតំឡើងសំរាប់ការកំណត់ពេលវេលា) ត្រូវបានប្រើប្រាស់ដើម្បីត្រួតពិនិត្យរយៈពេលនៃគ្រឿងប្រើប្រាស់អេឡិចត្រូនិច ដូចជាម៉ាស៊ីនត្រជាក់ កង្ហារ និងអំពូលនៅក្នុងសណ្ឋាគារ ដូចជា នៅបន្ទប់ទទួលភ្ញៀវ និងបន្ទប់ផ្សេងទៀត (បន្ទប់បុគ្គលិក កន្លែងទទួលភ្ញៀវ។ ល។ )					
22. រន្ធកាត់កូនសោរត្រូវបានប្រើដើម្បីដំណើរការថាមពលនៅក្នុងបន្ទប់ទទួលភ្ញៀវដែលវាបិទដោយស្វ័យប្រវត្តិនៅពេលដកសោរ។					
23. បង្អួចកញ្ចក់ពីរជាន់ត្រូវបានប្រើប្រាស់ដើម្បីកាត់បន្ថយកំដៅព្រះអាទិត្យនិងសម្លេងរំខានពីខាងក្រៅ។					



24. ភ្ញៀវត្រូវបានលើកទឹកចិត្តឱ្យចូលរួមក្នុងការអភិរក្ស/កាត់បន្ថយការប្រើប្រាស់ថាមពលអគ្គិសនី ដោយបិទភ្លើងអគ្គិសនី ដូចជាអំពូល ទូរទស្សន៍។ ល។ មុនពេលចាកចេញពីបន្ទប់នៅពេលមិនប្រើវា។					
25. មានសញ្ញា/អក្សរ សម្រាប់លើកទឹកចិត្តភ្ញៀវដើម្បីសន្សំសំចៃថាមពលនៅបន្ទប់សណ្ឋាគារ។					
<b>b. ការប្រើប្រាស់ទឹកប្រកបដោយប្រសិទ្ធភាព</b>					
26. បុគ្គលិករបស់សណ្ឋាគារត្រូវបានបណ្តុះបណ្តាលអំពីការសន្សំសំចៃទឹកដែលអាចជួយរក្សាបរិស្ថាន។					
27. បង្គន់អនាម័យដែលសន្សំសំអាតទឹក ត្រូវបានដំឡើងនៅបន្ទប់ទឹកបន្ទប់ភ្ញៀវនិងកន្លែងផ្សេងៗទៀត (បុគ្គលិក អាងហែលទឹក)					
28. ក្បាលផ្កាឈូកដែលប្រើទឹកតិច (ក្បាលផ្កាឈូក) ត្រូវបានគេប្រើនៅបន្ទប់ទឹកបន្ទប់ភ្ញៀវនិងកន្លែងផ្សេងៗទៀត (បុគ្គលិក អាងហែលទឹក)					
29. ទឹកភ្លៀងត្រូវបានស្តុក និង ប្រើប្រាស់ក្នុងសណ្ឋាគារដើម្បីកាត់បន្ថយការប្រើប្រាស់ទឹកពីទន្លេ និង ទឹកក្រោមដី ។					
30. ទឹកប្រើប្រាស់រួចត្រូវបានកែច្នៃ/ព្យាបាលឡើងវិញ (សំរាប់ស្រោចផ្កាស្លូនច្បារនិងដើមឈើ)។					
31. ភ្ញៀវកិត្តិយសត្រូវបានលើកទឹកចិត្តឱ្យចូលរួមក្នុងការអភិរក្សទឹកដោយកាត់បន្ថយការប្រើប្រាស់ទឹក (ដាក់សេចក្តីណែនាំ ឬផ្ទាំងផ្សេងៗ ល។ )					
32. មានសញ្ញា/អក្សរដើម្បីលើកទឹកចិត្តភ្ញៀវសម្រាប់ការសន្សំទឹកនៅបន្ទប់សណ្ឋាគារ។					
<b>c. ការគ្រប់គ្រងកាកសំណល់</b>					
33. មានឧបករណ៍ដូចជាធុងសំរាមសម្រាប់គ្រប់គ្រងកាកសំណល់រឹង។					
34. ឧបករណ៍កែច្នៃទឹកមានតាមនៅសណ្ឋាគារដើម្បីកែច្នៃ/ព្យាបាលទឹកដែលប្រើប្រាស់រួច។					
35. កាកសំណល់អាហារ / ស្លូនច្បារត្រូវបានកែច្នៃធ្វើជាជីសរីរាង្គ។					
36. វត្ថុដែលបោះចោល ដូចជា គ្រឿងសង្ហារឹមខូចខាត ឈើ ដបស្រា ត្រូវបានកែច្នៃ និងប្រើឡើងវិញ។					
37. កាកសំណល់រឹងត្រូវបានតម្រៀបដាក់ធុងសំរាម ដែលចំណាត់ថ្នាក់តាមក្រុមដូចជា កាកសំណល់ផ្ទះបាយ ក្រដាស កែវ បាស្ទិក កំប៉ុងអាលុយមីញ៉ូម។					
38. ឯកសារដែលបានប្រើប្រាស់រួចត្រូវបានកែច្នៃដើម្បីប្រើប្រាស់នៅក្នុងសណ្ឋាគារឡើងវិញ។					



39. កម្មវិធីកែច្នៃនិងចំណាត់ថ្នាក់កាកសំណល់រឹងត្រូវបានណែនាំសម្រាប់បុគ្គលិកនិងភ្ញៀវ។					
40. ការប្រើសាប៊ូបោកគត់ត្រូវបានកាត់បន្ថយដោយលើកទឹកចិត្តឱ្យភ្ញៀវប្រើប្រាស់ឡើងវិញនូវក្រណាត់ និង សំភារៈ ក្នុងកំឡុងគាត់ស្នាក់នៅ ។					
<b>d. ការគ្រប់គ្រងគុណភាពខ្យល់</b>					
41. កន្លែងជក់បារី និង កន្លែងមិនជក់បារីត្រូវបានរៀបចំសំរាប់ភ្ញៀវ។					
42. គ្រប់សម្ភារៈ និង បរិក្ខារសណ្តាគារទាំងអស់ត្រូវបានត្រួតពិនិត្យដើម្បីធានាគុណភាព បរិយាកាសល្អ ដូចជាការ ត្រួតពិនិត្យ និង ថែរក្សាម៉ាស៊ីនត្រជាក់បានទៀងទាត់។					
43. ម៉ាស៊ីនស្រូបយកខ្យល់ត្រូវបានបំពាក់នៅក្នុងសណ្តាគារនិងបន្ទប់ភ្ញៀវដើម្បីកុំអោយមានក្លិនមិនល្អ។					
44. ទឹកកន្លែងផ្សេងៗ (ស្ថានភាព កន្លែងផ្សេងៗ) ត្រូវបានរៀបចំអោយមាលក្ខណៈបែតងនៅក្នុងសណ្តាគារអាជីវជនដ្ឋាន ដូចជា មានតាំងរក្សាជាតិបែតង ។					
45. អគារសណ្តាគារដែលអនុវត្តគោលការណ៍បែតងត្រូវបានគេចន្លងនិងសាងសង់ (ឧទាហរណ៍៖ បំពាក់កញ្ចក់នៅដំបូល បង្អួច និង ជញ្ជាំង ដើម្បីទទួលបានពន្លឺដោយកាត់បន្ថយនូវការប្រើប្រាស់អគ្គីសនី) ។					
<b>3. លើកកម្ពស់ការប្រើប្រាស់ផលិតផលបែតងនិងការអភិវឌ្ឍសេដ្ឋកិច្ចមូលដ្ឋាន</b>					
<b>a. ការប្រើប្រាស់ផលិតផលបែតង</b>					
46. ផលិតផលសរីរាង្គ / ធម្មជាតិដែលមានគុណភាពល្អនៅមូលដ្ឋានដូចជាអាហារនិងសាច់ត្រូវបានប្រើនៅក្នុងសណ្តាគារ។					
47. ផលិតផលសរីរាង្គ / ធម្មជាតិ ដែលមានគុណភាពល្អ ដូចជាបន្លែ ផ្លែឈើ ត្រូវបានប្រើប្រាស់នៅក្នុងសណ្តាគារ។					
48. វត្ថុ និងសំភារៈធម្មជាតិដែលមានគុណភាពល្អក្នុងមូលដ្ឋាន ដូចជាវត្ថុអនុស្សាវរីយ៍ក៏ដូចជា សម្ភារៈផ្សេងៗទៀតនៅក្នុងសណ្តាគារត្រូវបានប្រើប្រាស់។					
<b>b. ការលើកទឹកចិត្តក្នុងការអនុវត្តន៍បែតង (ឱកាសការងារនៃអាជីវកម្មបែតង)</b>					
49. ប្រជាជនក្នុងតំបន់ដែលមានចំណេះដឹងអំពីអាជីវកម្មបែតងត្រូវបានផ្តល់ឱកាសឱ្យធ្វើជាបុគ្គលិកប្រតិបត្តិការក្នុងសណ្តាគារ។					
50. ប្រជាជនក្នុងតំបន់ដែលមានចំណេះដឹងអំពីអាជីវកម្មបែតងត្រូវបានគេជួលឱ្យធ្វើជាបុគ្គលិកគ្រប់គ្រងក្នុងសណ្តាគារ។					
51. ឱកាសការងារស្មើគ្នាត្រូវបានផ្តល់ជូនរួមបញ្ចូលទាំងជនពិការ (ឧ. សម្រាប់ជនពិការ)					
52. ឱកាសអាជីវកម្មនៅក្នុងសណ្តាគារ ឬ សកម្មភាពដែលទាក់ទងនឹងភ្ញៀវត្រូវបានផ្តល់					



ល់ជូនដល់អ្នកមូលដ្ឋាន ដែលមានចំណេះដឹងស្តង់ដារបែតង (ឧ. មគ្គុទ្ទេសក៍ ទេសចរណ៍ កម្មវិធីវប្បធម៌ជាដើម)					
53. មានសកម្មភាពជាច្រើនដើម្បីកែលម្អជីវភាពរស់នៅរបស់ប្រជាពលរដ្ឋនៅក្នុង សហគមន៍មូលដ្ឋាន។					
54. សណ្ឋាគារមានគោលនយោបាយក្នុងការជ្រើសរើសមនុស្សដែលមានចំណេះដឹង អំពីអាជីវកម្មបែតង។					
55. សណ្ឋាគារមានគោលនយោបាយជំរុញបុគ្គលិកដែលមានចំណេះដឹងអំពីអាជីវកម្ម បែតង។					
<b>c. ការយល់ដឹងពីបរិស្ថានសម្រាប់សហគមន៍មូលដ្ឋាននិងការលើកកម្ពស់វប្បធម៌ និងប្រពៃណីក្នុងមូលដ្ឋាន</b>					
56. សហគមន៍មូលដ្ឋានត្រូវបានអប់រំ អំពីការងារថែរក្សាបរិស្ថាន ដោយឬដោយមាន ការគាំទ្រពីសណ្ឋាគារ។					
57. ភ្ញៀវត្រូវបានលើកទឹកចិត្តចូលរួមក្នុងសកម្មភាពប្រពៃណី និង ទំនៀមទម្លាប់ ក្នុង មូលដ្ឋាន ។					
58. សណ្ឋាគារបានចូលរួមដោយផ្ទាល់និង / ឬជាមួយភាគីផ្សេងទៀតដើម្បីគាំទ្រនិង / ឬជួយសហគមន៍មូលដ្ឋាន ជាថវិកា ឬ សំភារៈ ។					

**ផ្នែកទី 2: ប្រសិទ្ធផល និងប្រសិទ្ធភាព**

សេចក្តីផ្តើមការណ៍ខាងក្រោមនេះផ្តោតលើប្រសិទ្ធផល និងប្រសិទ្ធភាពនៃការអនុវត្តស្តង់ដារអាជីវកម្មបែតងនៅ ក្នុងសណ្ឋាគារ។ សូមបញ្ជាក់ពីកម្រិតនៃការឯកភាពរបស់អ្នកនូវសេចក្តីផ្តើមការណ៍ខាងក្រោមនេះពីលេខ 1 ដល់លេខ 5 ដែលតំណាងអោយ (1 = មិនយល់ស្របទាំងស្រុង 2 = មិនយល់ស្រប 3 = អាព្យាក្រឹត្យ 4 = យល់ព្រមហើយ 5 = យល់ស្របខ្លាំង)

ប្រសិទ្ធផល និងប្រសិទ្ធភាព	1	2	3	4	5
59. ការអនុវត្តស្តង់ដារជំនួញបែតងនៅក្នុងសណ្ឋាគាររបស់ខ្ញុំបានកាត់បន្ថយការប្រើ ប្រាស់ទឹក។					
60. ការអនុវត្តស្តង់ដារជំនួញបែតងនៅក្នុងសណ្ឋាគាររបស់ខ្ញុំបានបន្ថយការប្រើប្រាស់ ថាមពល/អគ្គិសនី។					
61. ការអនុវត្តស្តង់ដារជំនួញបែតងនៅក្នុងសណ្ឋាគាររបស់ខ្ញុំបានកាត់បន្ថយថ្លៃ ចំណាយប្រតិបត្តិការសណ្ឋាគារ។					
62. ការអនុវត្តស្តង់ដារជំនួញបែតងនៅក្នុងសណ្ឋាគាររបស់ខ្ញុំបាននាំអោយមានការ កើនឡើងចំនួនភ្ញៀវ។					



63. ការអនុវត្តស្តង់ដារអាជីវកម្មបែតងនៅក្នុងសណ្ឋាគាររបស់ខ្ញុំបានបង្កើនប្រាក់ចំណេញ។					
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សូមឆ្លើយសំណួរខាងក្រោម

<b>សំណួរ</b>	
<b>ការប្រើប្រាស់ថាមពល</b>	
64. តើប្រើថវិកាអគ្គិសនីអស់ប៉ុន្មាន KWh ក្នុងមួយខែ នៅក្នុងសណ្ឋាគាររបស់អ្នក?	
65. តើអ្នកកាត់បន្ថយការប្រើប្រាស់អគ្គិសនីចំនួនប៉ុន្មាន KWh ក្នុងមួយខែ ពីការអនុវត្តស្តង់ដារអាជីវកម្មបែតងនៅក្នុងសណ្ឋាគាររបស់អ្នក?	
<b>ការប្រើប្រាស់ទឹក</b>	
66. នៅក្នុងសណ្ឋាគាររបស់អ្នក តើប្រើទឹកប៉ុន្មានគីប ក្នុងមួយខែ?	
67. តើសណ្ឋាគាររបស់អ្នកកាត់បន្ថយការប្រើប្រាស់ទឹកប៉ុន្មានគីបក្នុងមួយខែ ពីការអនុវត្តស្តង់ដារអាជីវកម្មបែតងនៅក្នុងសណ្ឋាគារ?	
<b>កាកសំណល់</b>	
68. តើកាកសំណល់ចំនួនប៉ុន្មានគីឡូក្រាម ដែលសណ្ឋាគាររបស់អ្នកបញ្ចេញ ក្នុងមួយខែ?	
69. តើកាកសំណល់ចំនួនប៉ុន្មានគីឡូក្រាមដែលសណ្ឋាគាររបស់អ្នកបញ្ចេញ បានកាត់បន្ថយក្នុងមួយខែ ពីការអនុវត្តបទដ្ឋានអាជីវកម្មនៅក្នុងសណ្ឋាគាររបស់អ្នក?	
<b>ការចំណាយ</b>	
70. តើអ្នកចំណាយប៉ុន្មាន (ដុល្លារ) សម្រាប់ការអនុវត្តបទដ្ឋានអាជីវកម្មបែតងនៅក្នុងសណ្ឋាគាររបស់អ្នក ក្នុងមួយឆ្នាំ?	
71. តើសណ្ឋាគាររបស់អ្នកសន្សំសំចៃប៉ុន្មាន (ដុល្លារ) ក្នុង១ ឆ្នាំ ពីការអនុវត្តបទដ្ឋានអាជីវកម្មពណ៌បែតងនៅក្នុងសណ្ឋាគាររបស់អ្នក?	
<b>ភ្ញៀវ</b>	
72. តើមានភ្ញៀវប៉ុន្មាននាក់នៅសណ្ឋាគាររបស់អ្នកក្នុងមួយខែ?	
73. តើភ្ញៀវបានកើនឡើងប៉ុន្មាននាក់ ក្នុងមួយខែ ដោយសារការអនុវត្តតាមបទដ្ឋានអាជីវកម្មបែតងនៅក្នុងសណ្ឋាគាររបស់អ្នក?	
<b>ចំណេញ</b>	
74. តើប្រាក់ចំណេញប៉ុន្មាន (ដុល្លារអាមេរិក) ដែលអ្នកបានទទួលក្នុងមួយឆ្នាំពីការអនុវត្តបទដ្ឋានអាជីវកម្មនៅក្នុងសណ្ឋាគាររបស់អ្នក?	

75. តើអ្នកការអនុវត្តស្តង់ដារបែតងក្នុងសណ្ឋាគាររបស់អ្នកបានបង្កើននូវប្រសិទ្ធផល និង ប្រសិទ្ធភាពយ៉ាងដូចម្តេច?  
ចូរអោយឧទាហរណ៍

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**ផ្នែកទី 3: កត្តាជំរុញ**

សេចក្តីផ្តើមការណ៍ខាងក្រោមនេះបង្ហាញពីកត្តាដែលជំរុញដល់ការអនុវត្តស្តង់ដារអាជីវកម្មបែតងនៅក្នុងសណ្ឋាគាររបស់អ្នក។ សូមផ្តល់ពិន្ទុដើម្បីបង្ហាញពីកំរិតនៃការឯកភាពរបស់អ្នកនៅលើសេចក្តីផ្តើមការណ៍ខាងក្រោម ហើយកំណត់ពិន្ទុចាប់ពីលេខ 1 ដល់លេខ 5 ដែលតំណាង (1 = មិនយល់ស្របទាំងស្រុង 2 = មិនយល់ស្រប 3 = អព្យាក្រឹត្យ 4 = យល់ព្រមហើយ 5 = យល់ព្រមយ៉ាងខ្លាំង)

កត្តាជំរុញសម្រាប់ការអនុវត្តអាជីវកម្មបែតង	1	2	3	4	5
76. ឆន្ទៈរបស់អតិថិជនក្នុងការបង់ប្រាក់បន្ថែមសម្រាប់ការអនុវត្តបែតងបានលើកទឹកចិត្តឱ្យខ្ញុំអនុវត្តស្តង់ដារបែតងនៅក្នុងសណ្ឋាគាររបស់ខ្ញុំ។					
77. ចំណេះដឹងរបស់អតិថិជនចំពោះការអភិវឌ្ឍន៍បែតងបានលើកទឹកចិត្តឱ្យខ្ញុំអនុវត្តស្តង់ដារបែតងនៅក្នុងសណ្ឋាគាររបស់ខ្ញុំ។					
78. ចំណេះដឹងរបស់អតិថិជនអំពីទេសចរណ៍បែតងបានលើកទឹកចិត្តឱ្យខ្ញុំអនុវត្តស្តង់ដារបែតងនៅក្នុងសណ្ឋាគាររបស់ខ្ញុំ។					
79. ការវិលត្រឡប់មកស្នាក់នៅរបស់អតិថិជនក្នុងការស្នាក់នៅសណ្ឋាគាររបស់ខ្ញុំបានលើកទឹកចិត្តឱ្យខ្ញុំអនុវត្តស្តង់ដារបែតងនៅក្នុងសណ្ឋាគាររបស់ខ្ញុំ។					
80. ផែនទីបង្ហាញផ្លូវអំពីការអភិវឌ្ឍន៍បែតងជាតិបានជំរុញឱ្យខ្ញុំអនុវត្តស្តង់ដារអាជីវកម្មបែតងនៅក្នុងសណ្ឋាគាររបស់ខ្ញុំ។					
81. គោលនយោបាយជាតិស្តីពីការអភិវឌ្ឍន៍បែតងបានជំរុញឱ្យខ្ញុំអនុវត្តបទដ្ឋានអាជីវកម្មបែតងនៅក្នុងសណ្ឋាគាររបស់ខ្ញុំ។					
82. យុទ្ធសាស្ត្រអភិវឌ្ឍន៍បែតងបានជំរុញឱ្យខ្ញុំអនុវត្តបទដ្ឋានអាជីវកម្មបែតងនៅក្នុងសណ្ឋាគាររបស់ខ្ញុំ។					
83. ទេសចរណ៍បែតងបានជំរុញឱ្យខ្ញុំអនុវត្តបទដ្ឋានអាជីវកម្មពាណិជ្ជកម្មបែតងនៅក្នុងសណ្ឋាគាររបស់ខ្ញុំ។					
84. សកម្មភាពសង្គម (យុទ្ធនាការបរិស្ថាន ... ។ ល។ ) ឆ្ពោះទៅរកការអនុវត្តបែតងបានលើកទឹកចិត្ត / ដាក់សម្ពាធឱ្យខ្ញុំអនុវត្តស្តង់ដារបែតងនៅក្នុងសណ្ឋាគាររបស់ខ្ញុំ។					
85. ការកាត់បន្ថយចំណាយបានលើកទឹកចិត្តឱ្យខ្ញុំអនុវត្តបទដ្ឋានអាជីវកម្មបែតងនៅក្នុងសណ្ឋាគារ។					
86. ខ្ញុំបានអនុវត្តស្តង់ដារជំនួញបែតងនៅក្នុងសណ្ឋាគាររបស់ខ្ញុំដោយសារតែវាបានលើកកម្ពស់មុខមាត់សណ្ឋាគាររបស់ខ្ញុំ។					

87. តើកត្តាជំរុញខាងលើបានលើកទឹកចិត្តឱ្យអ្នកអនុវត្តស្តង់ដារអាជីវកម្មពាណិជ្ជកម្មបែតងនៅក្នុងសណ្ឋាគាររបស់អ្នកយ៉ាងដូចម្តេចដែរ? ចូរអោយឧទាហរណ៍



សូមឆ្លើយសំណួរដូចខាងក្រោម

88. តើមានភ្ញៀវប៉ុន្មានភាគរយ ដែលមានបំណងក្នុងការបង់ថ្លៃបន្ថែមសម្រាប់ការអនុវត្តបែតងក្នុងសណ្ឋាគារ?	
89. តើភ្ញៀវនីមួយៗអាចបង់ប្រាក់បន្ថែមសម្រាប់ការអនុវត្តបែតងចំនួនប៉ុន្មានដុល្លារ?	
90. តើមានភ្ញៀវប៉ុន្មានភាគរយ ដែលបានត្រឡប់មកស្នាក់នៅសណ្ឋាគាររបស់អ្នក ដោយសារតែការអនុវត្តបែតងនៅសណ្ឋាគាររបស់អ្នក?	

#### ផ្នែកទី 4: ឧបសគ្គ

សេចក្តីផ្តើមការណ៍ខាងក្រោមនេះបង្ហាញពីកត្តាដែលជាការរារាំងសម្រាប់អ្នកដើម្បីអនុវត្តបទដ្ឋានបែតងនៅក្នុងសណ្ឋាគាររបស់អ្នក។ សូមដាក់ពិន្ទុដើម្បីបង្ហាញពីកំរិតនៃការឯកភាពរបស់អ្នកលើសេចក្តីផ្តើមការណ៍ខាងក្រោមហើយលេខគឺចាប់ពីលេខ 1 ដល់លេខ 5 ដែលតំណាងឱ្យ (1 = មិនយល់ស្របទាំងស្រុង 2 = យល់ព្រម 3 = អព្យាក្រឹត្យ 4 = យល់ព្រមនិង 5 = យល់ព្រមយ៉ាងខ្លាំង)

កត្តាឧបសគ្គចំពោះការអនុវត្តអាជីវកម្មបែតង	1	2	3	4	5
91. កង្វះខាតចំណេះដឹងនៃម្ចាស់សណ្ឋាគារឬអ្នកគ្រប់គ្រងនៅលើផែនទីបង្ហាញផ្លូវអំពីការអភិវឌ្ឍន៍បែតងថ្នាក់ជាតិបានប្រឈមសំរាប់ការអនុវត្តស្តង់ដារជំនួញបែតងនៅក្នុងសណ្ឋាគារ។					
92. កង្វះចំណេះដឹងនៃម្ចាស់សណ្ឋាគារឬអ្នកគ្រប់គ្រងលើគោលនយោបាយជាតិស្តីពីការអភិវឌ្ឍន៍បែតងបានប្រឈមចំពោះការអនុវត្តស្តង់ដារជំនួញបែតងនៅក្នុងសណ្ឋាគារ។					
93. កង្វះខាតចំណេះដឹងនៃម្ចាស់សណ្ឋាគារឬអ្នកគ្រប់គ្រងលើយុទ្ធសាស្ត្រការអភិវឌ្ឍន៍បែតងបានប្រឈមសំរាប់ការអនុវត្តបទដ្ឋានអាជីវកម្មពាណិជ្ជកម្មបែតងនៅក្នុងសណ្ឋាគារ។					
94. កង្វះចំណេះដឹងនៃម្ចាស់សណ្ឋាគារឬអ្នកគ្រប់គ្រងលើទេសចរណ៍បែតងគឺជាឧបសគ្គសម្រាប់ខ្ញុំក្នុងការអនុវត្តស្តង់ដារអាជីវកម្មបែតងនៅក្នុងសណ្ឋាគាររបស់ខ្ញុំ។					
95. កង្វះចំណេះដឹងអំពីម្ចាស់សណ្ឋាគារឬអ្នកគ្រប់គ្រងលើការណែនាំ / ប្រកាសស្តីពីការគ្រប់គ្រងសណ្ឋាគារនិងកន្លែងស្នាក់នៅគឺជាឧបសគ្គសម្រាប់ខ្ញុំក្នុងការអនុវត្តស្តង់ដារអាជីវកម្មពាណិជ្ជកម្មបែតងនៅក្នុងសណ្ឋាគាររបស់ខ្ញុំ។					
96. ការចំណាយបន្ថែមសម្រាប់ការកែលម្អបែតង (ឧទាហរណ៍កែច្នៃអាគារដែលមានស្រាប់អោយក្លាយជាអាគារដែលអនុវត្តតាមស្តង់ដារបែតង) ជាឧបសគ្គចំពោះការ					



អនុវត្តស្តង់ដារអាជីវកម្មបែតងនៅក្នុងសណ្ឋាគាររបស់ខ្ញុំ។					
97. ការមិនទទួលស្គាល់នូវតម្លៃនៃបទដ្ឋានអាជីវកម្មពាណិជ្ជកម្មបែតងបានរាងសម្រាប់ការអនុវត្តស្តង់ដារអាជីវកម្មបែតងនៅក្នុងសណ្ឋាគាររបស់ខ្ញុំ។					
98. ការចំណាយបន្ថែមសំរាប់កំលាំងពលកម្មសំរាប់បុគ្គលិកដែលទទួលបន្ទុកការអនុវត្តន៍បែតងក្នុងសណ្ឋាគារ បានរាងសម្រាប់ការអនុវត្តស្តង់ដារអាជីវកម្មបែតងនៅក្នុងសណ្ឋាគាររបស់ខ្ញុំ។					
99. ការខ្វះចំណេះដឹងរបស់បុគ្គលិកលើស្តង់ដារបែតងត្រូវបានរាងសម្រាប់ការអនុវត្តស្តង់ដារបែតងនៅក្នុងសណ្ឋាគាររបស់ខ្ញុំ។					
100. ការមិនចាប់អារម្មណ៍របស់បុគ្គលិកលើបទដ្ឋានពាក់ព័ន្ធនឹងបទដ្ឋានអាជីវកម្មបែតងបានរាងខ្ញុំក្នុងការអនុវត្តន៍បទដ្ឋានអាជីវកម្មបែតងនៅក្នុងសណ្ឋាគាររបស់ខ្ញុំ។					

101. តើកត្តាខាងលើបានប្រឈមក្នុងការអនុវត្តស្តង់ដារបែតងក្នុងសណ្ឋាគាររបស់អ្នកយ៉ាងដូចម្តេច? ចូរអោយឧទាហរណ៍

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102. តើអ្នកមានអនុសាសន៍ដើម្បីកែលម្អការអនុវត្តន៍បទដ្ឋានអាជីវកម្មបែតងនៅក្នុងសណ្ឋាគារទេ?

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ខ្ញុំសូមផ្ដេចអំណរគុណយ៉ាងជ្រាលជ្រៅចំពោះពេលវេលាដ៏មានតម្លៃរបស់អ្នកដើម្បីបំពេញព័ត៌មានក្នុងបញ្ជីរសំណួរ ។ ខ្ញុំសូមជូនពរឱ្យលោកប្រធានទទួលជោគជ័យក្នុងការងារ ។

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## **Appendices 2: Questionnaire for Department Officials**

My name is Por Narith, a student of The University of Cambodia (UC). I am doing research to complete a PhD in Business Management, focusing on "Adoption of Green Business Standards in the Hotels: Case Study in Cambodia". Your information given is being kept confidentially. Thank you for your valuable time to answer the following questions.

### **I. Demographics**

Respondents' Name: .....Age:.....Position:.....Province:.....

### **II. Dimensions**

1. What activities has Provincial Department of Tourism done to improve greening application in the hotels in your province?
2. Have the Provincial Department of Tourism disseminated green policy, green strategy and green roadmap to hotel staff?
3. What have the hotels in your province contributed for improving rural livelihoods in your province?
4. What activities have the hotels in your province implemented to protect environment?
5. How have the hotels in your province managed solid and liquid waste (used plastic bottles)? Have the used water been treated for re-uses, drained directly to rivers or sea? If the used water has flowed into the river or the sea, how have the Provincial Department of Tourism handled these issues?
6. How has the air in the hotels in your province been managed?
7. How has organic vegetables been promoted in the hotels in your province?
8. How have the hotels in your province encouraged those who have knowledge of green standards to work in the hotels?
9. What are the benefits of applying Green Business Standard in the hotels in your province? Give a specific example of one case, if possible?
10. What factors have encouraged hotels owners/managers to apply green business standards in the hotels?
11. What the factors have hindered the application of green business standards in hotels in your province?



12. Do you have any recommendation to improve and promote the application of green business standards in hotels in your province?



# សំណួរ

ខ្ញុំបាទឈ្មោះ ប៉ៅ ណារីទ្ធ ជានិស្សិតនៃសាកលវិទ្យាល័យកម្ពុជា(UC)។ ខ្ញុំកំពុងធ្វើការស្រាវជ្រាវដើម្បីបញ្ចប់ការសិក្សាថ្នាក់បណ្ឌិតផ្នែកការគ្រប់គ្រងធុរកិច្ច ដោយផ្ដោតលើ "ការអនុវត្តស្តង់ដារពាណិជ្ជកម្មបែតងនៅក្នុងឧស្សាហកម្មសណ្ឋាគារ" ការឆ្លើយតបនិងឈ្មោះរបស់អ្នកឆ្លើយនឹងត្រូវបានរក្សាការសម្ងាត់។ សូមអរគុណចំពោះការចំណាយពេលវេលាដ៏មានតំលៃរបស់លោកប្រធានដើម្បីឆ្លើយសំណួរខាងក្រោមនេះ។

## III. ព័ត៌មានប្រជាសាស្ត្រ

ឈ្មោះអ្នកផ្តល់សំភាសន៍ .....ភេទ..... តួនាទី .....ខេត្ត.....

## IV. ព័ត៌មានអំពីការចូលរួមរបស់អ្នកក្នុងការលើកកម្ពស់ស្តង់ដារបែតង

1. តើមន្ទីរទេសចរណ៍បានធ្វើអ្វីខ្លះដើម្បីលើកកម្ពស់ការអនុវត្តស្តង់ដារអាជីវកម្មបែតងនៅតាមសណ្ឋាគារក្នុងខេត្តរបស់អ្នក?
2. តើមន្ទីរទេសចរណ៍បានផ្សព្វផ្សាយអំពីគោលនយោបាយបែតង យុទ្ធសាស្ត្របែតង និង ផែនទីបង្ហាញផ្លូវនៃការអនុវត្តស្តង់ដារបែតងដល់បុគ្គលិកសណ្ឋាគារដែររឺទេ?
3. តើសណ្ឋាគារក្នុងខេត្តរបស់អ្នកបានចូលរួមចំណែកអ្វីខ្លះដល់ការពង្រឹងជីវភាពសហគមន៍ជនបទក្នុងខេត្តរបស់អ្នក?
4. តើសណ្ឋាគារក្នុងខេត្តរបស់អ្នកបានចូលរួមសកម្មភាពអ្វីខ្លះដើម្បីការពារបរិស្ថាន និងលើកកម្ពស់ការថែរក្សាបរិស្ថាន?
5. តើសណ្ឋាគារក្នុងខេត្តរបស់អ្នកមានការគ្រប់គ្រងការកសាងរឹង និងរាវ យ៉ាងដូចម្តេច (ផ្ដាស្ទឹកដែលប្រើប្រាស់រួច រឺទឹកដែលប្រើប្រាស់រួច)? តើទឹកដែលសណ្ឋាគារប្រើប្រាស់រួច ត្រូវបានប្រើកែប្រែដើម្បីប្រើប្រាស់ឡើងវិញ រឺបង្ហូរចូលទន្លេ រឺសមុទ្រ? បើបង្ហូរចុះទន្លេ រឺ សមុទ្រ តើមន្ទីរមានវិធានការយ៉ាងណាដើម្បីគ្រប់គ្រងទឹកទាំងនោះ?
6. តើសណ្ឋាគារក្នុងខេត្តរបស់អ្នកមានការគ្រប់គ្រងគុណភាពខ្យល់យ៉ាងដូចម្តេចដែរ?
7. តើសណ្ឋាគារក្នុងខេត្តរបស់អ្នកមានការលើកកម្ពស់ការប្រើប្រាស់បន្លែនិងសាច់ធម្មជាតិ (ដែលមិនមានប្រើប្រាស់ជីគីមី )យ៉ាងដូចម្តេចដែរ?
8. តើសណ្ឋាគារក្នុងខេត្តរបស់អ្នកមានទឹកចិត្តដល់អ្នកដែលមានចំណេះដឹងខាងអាជីវកម្មបែតងក្នុងការធ្វើការងារក្នុងសណ្ឋាគារយ៉ាងដូចម្តេចដែរ?
9. តើការអនុវត្តស្តង់ដារអាជីវកម្មបែតងនៃក្នុងសណ្ឋាគារក្នុងខេត្តរបស់អ្នកបានផ្តល់ផលប្រយោជន៍អ្វីខ្លះ? ចូរអោយឧទាហរណ៍ជាក់លាក់អោយបានមួយករណី បើអាច?
10. តើកត្តាអ្វីខ្លះដែលជំរុញអោយម្ចាស់សណ្ឋាគារអនុវត្តស្តង់ដារអាជីវកម្មបែតងក្នុងសណ្ឋាគាររបស់គាត់ក្នុងខេត្តរបស់អ្នក?
11. តើអ្វីខ្លះដែលជាកត្តារារាំងដល់ការអនុវត្តស្តង់ដារអាជីវកម្មបែតងក្នុងសណ្ឋាគារក្នុងខេត្តរបស់អ្នក?



12. តើមានអ្នកមានអនុសាសន៍យ៉ាងដូចម្តេចដើម្បីកែលំអរ  
សណ្ឋាគារក្នុងខេត្តរបស់អ្នក?

និងជំរុញការអនុវត្តន៍ស្តង់ដារអាជីវកម្មបែតងក្នុង



### Appendices 3: Letter from UC for Research

**The University of Cambodia  
The Tony Fernandes School of Business**


June 15, 2018

To Whom It May Concern:

This is to certify that **Mr. Por Narith**, is currently taking Doctoral of Business Administration at The Tony Fernandes School of Business at The University of Cambodia. In relation to this, for his thesis writing he needs to conduct interview to gather more accurate data and information, therefore, kindly allow him to do the said activity at your respective company without interference with your operation.

In this thesis writing the student needs reliable information and I hope your full support on this academic endeavor. Thank you in advance and if you have some inquiry please don't hesitate to contact this number +855-93 777 589 or email address [dean\\_com@uc.edu.kh](mailto:dean_com@uc.edu.kh).

Best regards,




**Ms. Gina V. Lopez**  
**Dean**  
**The Tony Fernandes School of Business**  
**The University of Cambodia**



[illegible]




**Appendices 5: Request Letter of PDT to Hotel**



**ក្រសួងទេសចរណ៍**  
មន្ទីរទេសចរណ៍ខេត្តព្រះសីហនុ  
លេខ: ០៩៤៤.០៧៥.០៧.០៧.០៧...

**ព្រះរាជាណាចក្រកម្ពុជា**  
**ជាតិ សាសនា ព្រះមហាក្សត្រ**



**CAMBODIA**  
Kingdom of Wonder

ថ្ងៃចេញស្នើសុំ: ០៩/០៧/២០១២ ឆ្នាំ ២០១២ ល.ស ២៥២២

ខេត្តព្រះសីហនុ, ថ្ងៃទី ០៩/០៧/២០១២ ឆ្នាំ ២០១២

**សូមជម្រាបជូន**

**លោកស្រី នាយកសណ្ឋាគារ:**

**កម្មវត្ថុ:** ស្នើសុំជួយសម្របសម្រួលចាត់បញ្ជូនអ្នកគ្រប់គ្រងចូលរួមសំភាសន៍ជាមួយតំណាងនិស្សិតនៃនិស្សិតសកលវិទ្យាល័យកម្ពុជា ។

**យោង :** លិខិតចុះថ្ងៃទី ២៨ ខែកញ្ញា ឆ្នាំ២០១៨ របស់និស្សិតសកលវិទ្យាល័យកម្ពុជា ។

សេចក្តីដូចមានចែងក្នុងកម្មវត្ថុនិងយោងខាងលើ មន្ទីរទេសចរណ៍ សូមជម្រាបជូនលោកនាយកសណ្ឋាគារមេត្តាជ្រាបថា ដោយមានការស្នើសុំរបស់និស្សិតកំពុងធ្វើការសិក្សាស្រាវជ្រាវ ដើម្បីបញ្ចប់ការសិក្សាផ្នែកធុរកិច្ចអាជីវកម្មជាពិសេសការអនុវត្តស្តង់ដារពាណិជ្ជកម្មបែតងនៅក្នុងឧស្សាហកម្មសណ្ឋាគារ ។

ដើម្បីផ្តល់ព័ត៌មាននិងបទពិសោធន៍បានត្រឹមត្រូវទូលំទូលាយសំរាប់ការធ្វើនិក្ខេបបទបញ្ចប់កម្មសិក្សារបស់និស្សិតសកលវិទ្យាល័យកម្ពុជា មន្ទីរទេសចរណ៍ស្នើសុំ លោកនាយកសណ្ឋាគារ មេត្តាជួយសម្របសម្រួល និងចាត់បញ្ជូនអ្នកគ្រប់គ្រង សណ្ឋាគារ០១រូប ចូលរួមសម្ភាសន៍ ជាមួយតំណាងនិស្សិត ដែលប្រព្រឹត្តិទៅនៅ ថ្ងៃទី ១១-១២ ខែ កុម្ភៈ ឆ្នាំ ២០១៨ ចាប់ពីវេលាម៉ោង ៨:០០ព្រឹកតទៅ នៅក្នុងសណ្ឋាគាររបស់លោកនាយក ។

អាស្រ័យដូចបានជម្រាបជូនខាងលើ សូមលោកនាយក មេត្តាចូលរួមចាត់បញ្ជូនអ្នកគ្រប់គ្រងតាមសំណើសុំខាងលើតាមការគួរ។

សូម លោកនាយក ទទួលនូវការគោរពរាប់អានដ៏ស្មោះអំពីខ្ញុំ ។


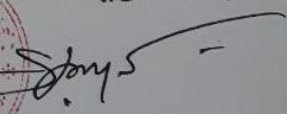
បញ្ជាក់

ព័ត៌មានបន្ថែម សូមទាក់ទង

លេខទូរស័ព្ទ ០១២ ៣៧ ១០ ០៣

០១៦ ៨៧ ៣០ ៥២

**ប្រធានមន្ទីរទេសចរណ៍ខេត្តព្រះសីហនុ**

**តាំង សុចិត្តត្រស៊ូ**