

**GREEN PRACTICE LEVEL OF EXHIBITION VENUES  
FROM EXHIBITORS' PERSPECTIVES**



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Thesis  
entitled  
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**ABSTRACT**

This study intended to examine the green practice level of exhibition venues from exhibitors' perspectives with respect to the Thailand Convention and Exhibition Bureau's Green Exhibition Guideline. The area of this study focused on exhibition production, communication and public relations, and souvenirs distribution. Furthermore, this study also intended to identify factors affecting the green practice level of exhibition venues.

To achieve the aims of this study, 394 survey questionnaires were completed by exhibitors from the Queen Sirikit National Convention Center and IMPACT Arena, Exhibition and Convention Center. A seven-Likert scale was used to measure the level of green practice and factors affecting the green practice level of exhibition venues. Quantitative analysis and hypothesis tests were performed by using SPSS. Descriptive statistics associated with frequencies, Chi-square, t-tests, ANOVA, and multiple regression analysis were employed to analyze the data.

The findings indicated that the highest green practice level of exhibition venues in each area was encouraging the exhibitors to select reusable materials from previous exhibitions offered by the venues, providing relevant information for the exhibition via the exhibition's website and/or email, and advocating exhibitors to avoid materials from plants or animals facing extinction for souvenirs. Moreover, the exhibitors perceived that the requirement for specific skills and qualified persons to implement green policy was the factor that most effects green practice level of exhibition venues. Additionally, this study also found significant positive relationships between factors affecting the green practice level and green practice level of exhibition venues.

**KEY WORDS: GREEN EXHIBITION/GREEN EXHIBITION GUIDELINE/  
GREEN PRACTICE/FACTORS AFFECTING GREEN PRACTICE**

189 pages

ระดับการดำเนินการตามนโยบายรักษาสีสิ่งแวดล้อมของศูนย์แสดงสินค้าจากมุมมองของผู้จัดแสดงสินค้า  
GREEN PRACTICE LEVEL OF EXHIBITION VENUES FROM EXHIBITORS' PERSPECTIVES

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บทคัดย่อ

วัตถุประสงค์ของการวิจัยครั้งนี้เพื่อประเมินระดับการดำเนินการตามนโยบายรักษาสีสิ่งแวดล้อมของศูนย์แสดงสินค้าจากมุมมองของผู้จัดแสดงสินค้า โดยพิจารณาจากคู่มือและวิธีการปฏิบัติที่เป็นเลิศในการจัดงานแสดงสินค้าภายใต้แนวคิดรักษาสีสิ่งแวดล้อมของสำนักงานส่งเสริมการจัดการประชุมและนิทรรศการ ซึ่งขอบเขตของการศึกษานี้มุ่งเน้นไปที่ขั้นตอนการจัดงานแสดงสินค้า การสื่อสารและการประชาสัมพันธ์ และการแจกของที่ระลึก นอกจากนี้การวิจัยนี้ยังมีวัตถุประสงค์เพื่อศึกษาปัจจัยที่มีผลต่อระดับการดำเนินการตามนโยบายรักษาสีสิ่งแวดล้อมของศูนย์แสดงสินค้าอีกด้วย

งานวิจัยนี้เก็บแบบสอบถามจำนวน 394 ชุดจากผู้จัดแสดงสินค้าจากศูนย์การประชุมแห่งชาติสิริกิติ์ และศูนย์แสดงสินค้าและการประชุม อิมแพ็ค เมืองทองธานี โดยใช้การวัดระดับความเห็นด้วยที่มีระดับ 1-7 จากการวิเคราะห์ข้อมูลเชิงปริมาณโดยใช้สถิติเชิงพรรณนาและทดสอบสมมติฐาน โดยโปรแกรม SPSS ทำให้ทราบว่าระดับการดำเนินการตามนโยบายรักษาสีสิ่งแวดล้อมของศูนย์แสดงสินค้าที่สูงที่สุดในแต่ละด้าน ได้แก่ การส่งเสริมให้ผู้จัดแสดงสินค้าเลือกใช้วัสดุจากงานแสดงสินค้าครั้งก่อนหน้าที่ยังเตรียมโดยศูนย์แสดงสินค้า การประชาสัมพันธ์งานแสดงสินค้าผ่านเว็บไซต์ของงานแสดงสินค้า และ/หรืออีเมล และการส่งเสริมให้ผู้จัดแสดงสินค้าหลีกเลี่ยงวัสดุจากพืชหรือสัตว์ที่ใกล้สูญพันธุ์ นอกจากนี้ผู้จัดแสดงสินค้ามีความเห็นว่าความต้องการบุคลากรที่มีคุณสมบัติเหมาะสมและมีทักษะเฉพาะในการดำเนินการตามนโยบายรักษาสีสิ่งแวดล้อมเป็นปัจจัยที่มีผลกระทบต่อระดับการดำเนินการตามนโยบายรักษาสีสิ่งแวดล้อมของศูนย์แสดงสินค้ามากที่สุด และที่สำคัญการศึกษานี้ยังพบความสัมพันธ์เชิงบวกระหว่างปัจจัยที่มีผลต่อระดับการดำเนินการตามนโยบายรักษาสีสิ่งแวดล้อมของศูนย์แสดงสินค้าและระดับการดำเนินการตามนโยบายรักษาสีสิ่งแวดล้อมของศูนย์แสดงสินค้าอีกด้วย

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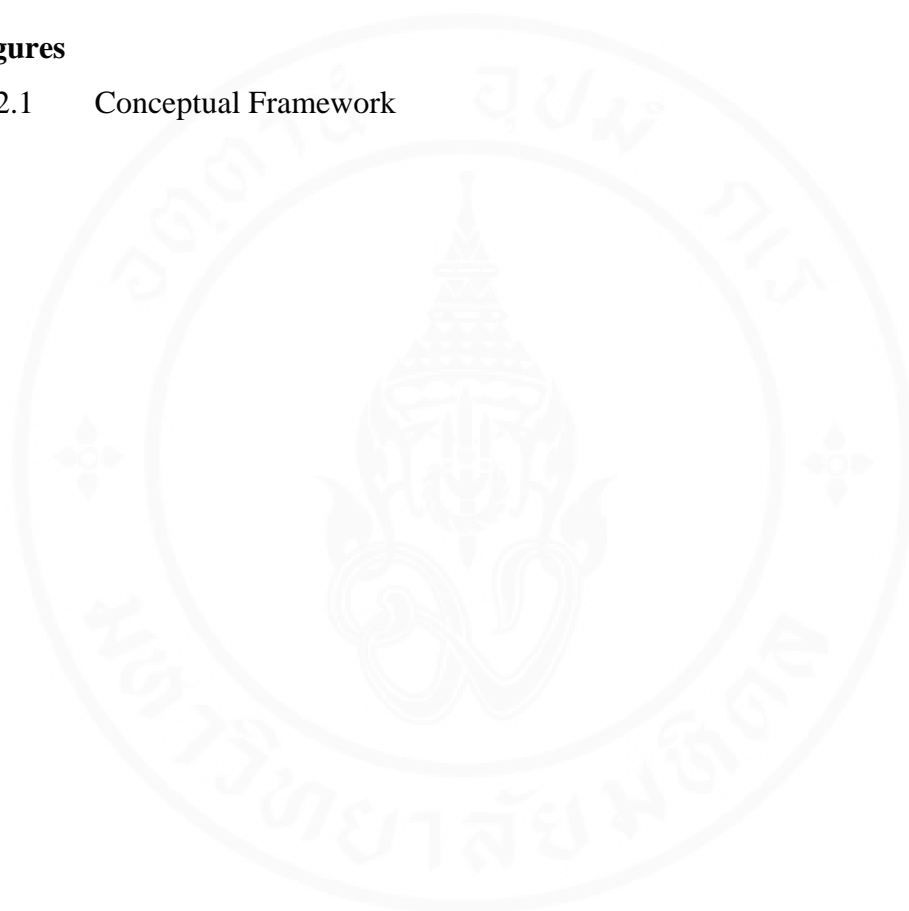
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## **CHAPTER I**

### **INTRODUCTION**

#### **1.1 Background of Study**

Global warming and diminishing resources have become the most significant environmental issues as they directly affect the lives of people. Not only is Thailand faced with this crisis, but also the whole world because of the increase in greenhouse gases emissions caused by the extensive growth of the world's population and industrial development. In other words, all countries in the world are consuming the planet's natural resources and contributing to global warming. Hence, we must all be responsible for the mitigation of this critical problem (National News Bureau of Thailand, 2010). Environmental consciousness is in the interest of every industry and business sector. Many of them have adopted the "Green" concept into their policies in order to reduce the impact on environment from their operations (Marcomm, 2009).

The exhibition industry is one industry that is realized about the environment and applies the green concept into its operation policy because the exhibition industry was determined to be the second most polluting and wasteful industry (Chiou, 2011; McKye, 2009; Trade Show Advisor, 2013). Therefore, many organizations that play important roles in exhibition industry, both at the international and local levels, have driven the exhibition industry in the green direction by creating the best practices and guidelines for exhibition venues and other exhibition players to conduct their exhibitions (Convention Industry Council, 2004; Thailand Convention and Exhibition Bureau, 2009a). Consequently, the exhibition venues apply the guidelines and best practices into their operation policies and take actions to reduce waste and energy, reuse frequently used materials, and recycle leftover materials for new sources of energy in order to mitigate global warming and the diminishing resources crisis (UFI, 2009).

Dealing with green exhibition is not only about protecting the environment, but it is also about the growth of business and opportunity (Green Host

It, 2010). Therefore, green concept becomes a significant consideration for the success of exhibition venue business in global context. However, there are still several driving forces behind this growth. As stated by Maple (2007), the first reason is the increase in the expectations of local communities. Local people and communities are considered the major stakeholders who are directly affected by the organizing of exhibitions. Therefore, they expect the exhibition venues, as well as other players, to take a leadership role in implementing the environmental consciousness programs, which make them the first priority. The second reason is the increase in need of consumers because people today address the environmental concerns in their daily lives more so than in the past. In order to satisfy the consumers, exhibition venues must address the role of environmental consciousness into their operations as well. The final reason is cost-effective operations, particularly in the areas of energy and waste management. Implementation of the green concept can help the exhibition venues manage their long-term costs which leads to money savings.

In addition, the implementation of green concept into organization's policy can improve their public relations once they demonstrate a commitment to corporate social responsibility, which can create and enhance the competitive advantage and reputation of organization. For examples, special awards and particular standard certifications help increase the level of confidence and comfort of consumers who are concerned about the environment (Maple, 2007; Obritzhauser, 2011). Furthermore, green concept also presents positive opportunities for them in local as well as international market when it is used as their unique selling point (Convention Industry Council, 2004; Obritzhauser, 2011; Thailand Convention and Exhibition Bureau, 2009a).

Even though the green concept can improve the image of exhibition venues and benefit long-term business growth, the previous study noted that green concept now is used as a marketing tool rather than protecting the environment. Some exhibition venues still lacked the awareness to implement green policy into their operations when they are organizing the exhibitions (Laing & Frost, 2010). This can destroy the image and reputation of exhibition venues if the green concept is misused or overstated to consumers in comparison to the real situation (Katzel, 2007; Liang & Frost, 2010).

## 1.2 Statement of Problem

Although the exhibitions, both big and small, have social and economic benefits to local communities and host countries, they have negative impact on the environment, especially on resources and energy consumption and waste production. In organizing the exhibition, many resources are used to decorate the exhibition area, which generate a large amount of waste, particularly the display booths that are discarded after the events (Kim, Terazawa, Huruya, & Shiraishi, 2002). Furthermore, it consumes a lot of energy such as the electricity to run the exhibition and dispose of the waste (Chiou, 2011; Zamzuri, Awang, & Samdin, 2011).

Therefore, based on a survey of the U.S. Environmental Protection Agency, the exhibition industry was determined to be the second largest waste producer after the construction industry (Chiou, 2011; Mckye, 2009; Trade Show Advisor, 2013). Therefore, the trend towards green exhibitions has existed in the exhibition industry for several years because there are an increasing number of consumers concerned about the environment and it is considered a significant part of organization's commitment to green initiatives (Marcomm, 2009).

Many concerned organizations in exhibition industry, both at the local and international levels, try to drive the industry in the green direction. For instance, the Convention Industry Council (CIC), which is an international organization, created the Green Meetings Best Practices for MICE players that included the ways in which the exhibition players should conduct their exhibitions (Convention Industry Council, 2004). In Thailand, Thailand Convention and Exhibition Bureau (TCEB), as the official organization responsible for Thailand's MICE industry, launched the Go Green Exhibition Campaign to encourage exhibition venues and other players to make environmental accountability part of their business practices. Moreover, TCEB also provided Green Exhibition Guideline for exhibition venues and other players to conduct the green exhibitions as well (Thailand Convention and Exhibition Bureau, 2009c).

However, those concerned organizations cannot force every exhibition player to adopt green concept and apply all the best practices and guidelines into their operation policy because the green concept is not required by law (Chou et al., 2012; Earthshare, 2012). Therefore, there is no organization or tool to examine the practices

of exhibition players according to green initiatives and commitments. Consequently, the green policy of each exhibition player, such as exhibition venue, is presented in different ways. For example, Queen Sirikit National Convention Center (QSNCC) has introduced green policy relating to exhibitions by initiating the Green Venue for Green Exhibitions campaign. The campaign is aimed to encourage the exhibition organizers, exhibitors, visitors and the general public to use natural resources in consideration for sustainability (Queen Sirikit National Convention Center, 2011a). Meanwhile, IMPACT Arena, Convention and Exhibition Center (IMPACT) announced a green policy under the name I AM 3R. Regarding this policy, IMPACT encourages all people in the venue to display an environmental awareness by avoiding the use of ecologically unfriendly materials and toxic products as well as to modify use of materials and waste in order to provide new resources and products through reduction, re-use, and recycling activities (IMPACT Exhibition Management, 2010). This may lead to each exhibition having a different green level because of different green exhibition policy and may not achieve the goal of green exhibition.

Furthermore, previous studies have found that some exhibition venues lacked the necessary awareness to implement green policy into their operations, and overlooked the importance of consistency in implementing green concept (Laing & Frost, 2010). Some organizations perceived the implementation of green policy as a cost of operation because they needed to hire or train a staff with specific skills to implement green policy (ShMILE, 2006). Additionally, the staff implementing green policy might not have sufficient knowledge regarding environmental preservation and might not understand the green policy clearly (Despretz, 2001). These could be factors that affect the green level of exhibitions and may also affect the green policy implementation of exhibition venues.

As stated by UFI, the Global Association of the Exhibition Industry (2011), in order to achieve the goal of green exhibition, there is a need for the collaboration of all exhibition players such as exhibition venues, exhibition organizers and other service providers to join the industry's collective efforts using the industry's best practices and guidelines to ensure the exhibition business is a leading light for exhibitors and buyers to see that exhibition industry is a wholly sustainable business.

Therefore, this study intends to examine the green practice level of Thailand's exhibition venues from exhibitors' perspectives by using the TCEB's Green Exhibition Guideline as the basis. Because there are literally tons of materials incorporated into the exhibitions with exhibit booths, carpeting, collateral materials, give-away gifts and souvenirs, and etc. (Kellen Meetings, 2011), this study mainly focus on examining the green practice level of exhibition venues in three aspects which are exhibition production, communication and public relations, and souvenirs distribution. Moreover, this study intends to identify the factors affecting green practice of exhibition venues from exhibitors' perspectives as well.

### **1.3 Research Questions**

In this study, green exhibition guideline posted by Thailand Convention and Exhibition Bureau (TCEB) was adopted as basic guideline for green practice level assessment. It will help explore the current level of green practice by exhibition venues in Thailand. After that, the factors affecting green practice level will be identified. Therefore, this study intends to answer the following questions:

- 1) What is the green practice level of exhibition venues in Thailand relative to TCEB's Green Exhibition Guideline?
- 2) What are the factors affecting green practice level of exhibition venues in Thailand?

### **1.4 Research Objectives**

This study intends to explore the current situation regarding Thailand's exhibition industry, particularly the implementation of green policy by exhibition venues in Thailand from the exhibitors' perspectives in order to suggest directions of improvement to enhance the level of Thailand's exhibition industry. Therefore, this study is conducted with the following purposes:

- 1) To examine the green practice level of exhibition venues in Thailand relative to TCEB's Green Exhibition Guideline

2) To identify the factors affecting green practice level of exhibition venues in Thailand.

## 1.5 Research Hypotheses

In relation to research questions, the research hypotheses have been set as follow:

**Hypothesis 1:** Exhibitor's demographic has significant influence on green practice level of exhibition venue

**Hypothesis 2:** Exhibitor's demographic has significant influence on factors affecting green practice level of exhibition venue

**Hypothesis 3:** Exhibition venue has significant influence on green practice level regarding exhibition production

**Hypothesis 4:** Staff has significant influence on green practice level regarding exhibition production

**Hypothesis 5:** Exhibition venue has significant influence on green practice level regarding communication and public relations

**Hypothesis 6:** Staff has significant influence on green practice level regarding communication and public relations

**Hypothesis 7:** Exhibition venue has significant influence on green practice level regarding souvenirs distribution

**Hypothesis 8:** Staff has significant influence on green practice level regarding souvenirs distribution

## 1.6 Rationale of Research

This study contributes to a greater understanding of current situation regarding green exhibitions in Thailand. The results of this study showed the green practice level of exhibition venues in Thailand, particularly the green practice level of exhibition production, communication and public relations, and souvenirs distribution which can imply the current situation of Thailand's green exhibitions. Moreover, this study also identified the factors affecting green practice level of the venues as well.

The study results were interpreted and analyzed in order to determine which strength and weakness should be maintained or improved, then improvements for venue operations were suggested. In general, this study can be used as basic information for the exhibition venues to develop/improve their management strategies in order to enhance their performances according to green initiatives commitment and strengthen their image because the increasing consumers demand.

Importantly, this study generated new measurement scales to examine the green practice level of exhibition venues in Thailand. Therefore, the exhibition bureaus in Thailand, such as Thailand Convention and Exhibition Bureau, can use these scales as a basis to develop a set of key performance indicators (KPI) for Thailand's exhibition industry (Thailand Convention and Exhibition Bureau, 2009a). Consequently, the bureau can search for new directions in order to strengthen the brand image of Thailand's exhibition industry in order to cope with the increasing competition in international market, particularly in Asia because of the upcoming ASEAN Economic Community (AEC) in 2015 (Thailand Convention and Exhibition Bureau, 2011d). A strong branding of green concept and high-level of green practice can be used as a unique selling point for Thailand's exhibition industry and increase business competitiveness in order to compete at an international level. Moreover, it can also boost the visibility and recognition of Thailand on the world stage as a leader in incorporating environmental best practices into day-to-day business operations and show the potential of Thailand as a globally preferred destination for organizing completely green exhibitions.

## **1.7 Scope and Limitation**

This study focused on the relationship between exhibition venues and exhibitors and had the objectives of examining the green practice level of exhibition venues in Thailand and identifying the factors affecting green practice level of exhibition venues from exhibitors' perspectives. This is because the exhibition venues are major service providers who provide the places and facilities for organizing the exhibitions and the venues have their own policies for operating the exhibitions under

their responsibility. The exhibitors are the end users who use the places and facilities of exhibition venues; therefore they must follow the policies of the venues.

According to the study objectives, this study was conducted at the exhibition venues which stated themselves as green venues and which are on the green member lists posted by Thailand Convention and Exhibition Bureau (Green Meetings Thailand, 2009). Because of a number of conditions such as the permission of organizers to conduct the survey and the limitation of time, there were four exhibitions from two green exhibition venues used as the sample for this study which were Queen Sirikit National Convention Center (QSNCC) and IMPACT Arena, Convention and Exhibition Center (IMPACT).

Regarding the conducting of the survey, this study used the questionnaire as a study tool by distributing the questionnaires to exhibitors in those two exhibition venues. The questions were developed from Thailand Convention and Exhibition Bureau or TCEB's Green Exhibition Guideline. The guideline contains many best practices and guidelines covering all sections of the exhibition industry, however this study focused mainly on three areas that are particularly related to exhibition venues and most generated negative impact on the environment including exhibition production, communication and public relations, and souvenirs distribution.

## 1.8 Terms and Definitions

**Exhibition** - the specific marketplace based on a specific period that connects a large volume of exhibitors (sellers) from various industries and visitors (buyers) together.

**Exhibitor** – a person or firm that displays and sells its products or services at the exhibition.

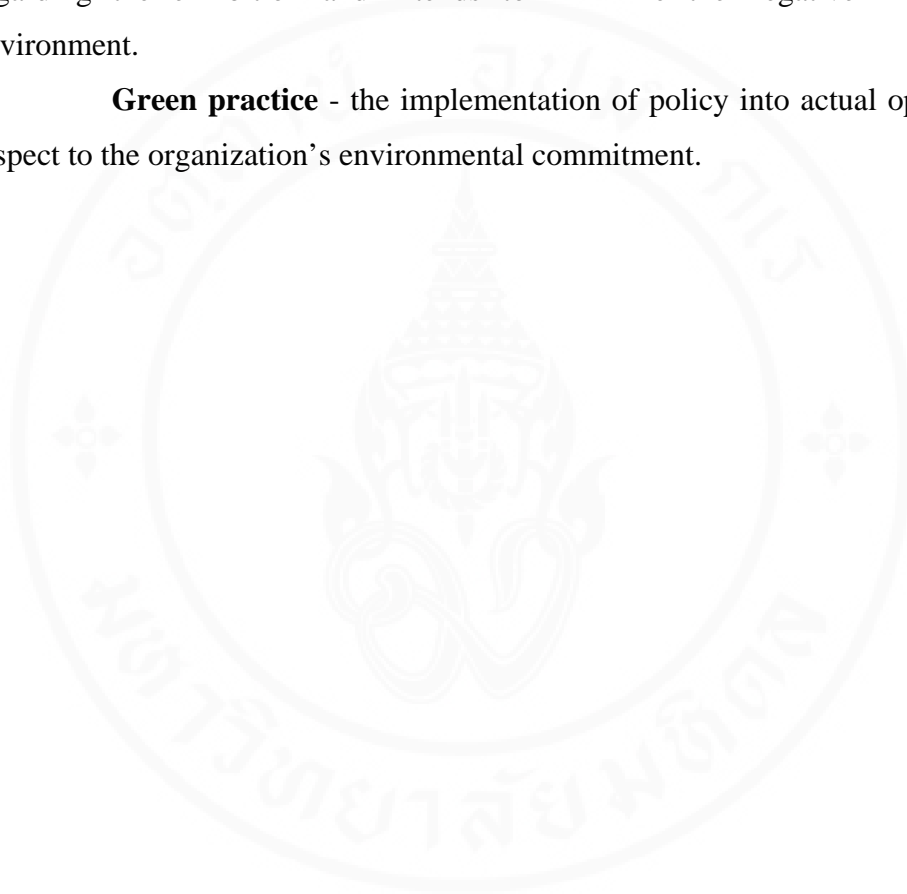
**Exhibition venue** – the place for organizing and holding the exhibition including staff who work for that place.

**Green exhibition** - the exhibition that integrates environmental responsibility into its management and operation processes by adopting the best policies and practices for environment in order to minimize the negative impact on environment.

**Green exhibition venue** - the exhibition venue that is concerned about environment and applies the environmental best practices into its policies and operations in order to minimize the negative impact on the environment.

**Green exhibition guideline** - a principle that determines the practices regarding the exhibition and intends to minimize the negative impact on the environment.

**Green practice** - the implementation of policy into actual operation with respect to the organization's environmental commitment.



## **CHAPTER II**

### **LITERATURE REVIEW**

The literature review of this study intends to introduce the topics relevant in this study in order to build a basis for the reader. They cover the topics of green exhibitions starting with the introduction of exhibitions, roles of exhibition venues and exhibitors, environmental impact of exhibitions, environmental movement, green concept in MICE, green exhibitions, and green exhibitions in Thailand. In addition, an introduction of green exhibition guidelines and green exhibition venues that were used as the study area are also provided. Furthermore, green practices, factors affecting green practices, an empirical study related to exhibitors' demographics and green practice level, and an empirical study related to factors affecting green practices and green practice level are also discussed. Additionally, the conceptual framework and null hypotheses tested in this study are also outlined.

#### **2.1 Introduction of Exhibition**

An exhibition, otherwise known as a fair or exposition, is an event or marketplace of a specific duration, where a large number of sellers from various industries display their goods and services to a group of buyers (Beier, n.d.; Fitz-Roy, 2005; The Green Book, 2013.). Exhibitions are not just collection of interesting objects brought together at certain places and time. They are human activities, human enterprises, undertaken for definite reasons and in order to achieve certain specified results. They are a form of human exchange, whereby the exhibitors on the one hand communicate with the visitors on the other. Their results can only be told in terms of further human thought and activity (Beier, n.d.). Exhibitions are advantageous for both exhibitors and visitors. Exhibitors or sellers can introduce and test their new products, thus allowing for feedback about the potential success of those products in the marketplace and gain additional income, while visitors or buyers can have the option

to examine different products and services, and find the item that best suits them in one place (Montgomery & Strick, 1995; The Green Book, 2013).

Various types of exhibitions are especially organized to cater to the needs of participants, which are separated into commercial and non-commercial exhibition (The Green Book, 2013). Commercial exhibitions are intended to attract buyers and sell the goods and services, while non-commercial exhibitions are simply arranged for the appreciation of talents and skills. Exhibitions can be categorized further as trade exhibitions and consumer exhibitions (An eHow Contributor, 2013; Beier, n.a.; Fitz-Roy, 2005; The Green Book, 2013). Trade exhibitions are business-to-business events where the exhibitors are typically manufacturers or distributors of products and services, while the visitors are typically industrial end users or other distributors within the industry. They are generally designed to meet the needs of a specific industry or particular type of business which let the exhibitors showcase their products and services to people involved only in that field. In this case, only invited visitors such as company representatives and press media can attend the exhibitions. The idea behind the trade exhibitions is a stage for communication among business players in order to determine if it can gain the interest of another company and exchange ideas and information between companies and potential clients, then follow up for sales afterwards (Beier, n.a.; Montgomery & Strick, 1995). Consumer exhibitions are events that are open to the general public where the primary purpose is direct selling. Exhibitors are typically retail outlets, manufacturers or service organizations looking to bring their goods and services directly to the end user. Consumer exhibitions may also be designed to attract a particular demographic (mothers, teenagers) or people with a specific hobby or interest (crafts, pets, books) or assembled to show a particular product or service (IT, cars, travel, food and beverages, home and garden).

However, some exhibitions are organized and open for both trade and consumers in the same events which are called mix exhibitions where trade visitors are allowed to enter the exhibition on special days while other days are open to the public (An eHow Contributor, 2013; Beier, n.a.). This type of exhibition will be referred in this study to mean *“the specific marketplace based on specific period that connects a big volume of exhibitors (sellers) from various industries and visitors (buyers) together”*. It is a place where the exhibitors can communicate, present and sell their

products and services to the visitors and the theme of exhibition is based on a particular product and service such as home and furniture, IT, food, and travel.

## **2.2 Roles of Exhibition Venue and Exhibitor**

### **2.2.1 Exhibitor**

Exhibitor, according to the CLC Glossary and Chapman cited by Montgomery and Strick (1995), is simply “the company or organization sponsoring the exhibit booth”. It rents space, purchases an exhibit, has it transported and set up, and all in return for an opportunity to sell (p. 147). In other words, the exhibitor is a seller in a certain industry related to the theme of the exhibition, which without exhibitors cannot happen (Yichen, 2010). Therefore, the exhibitor in this study means *“a person or firm that displays and sells its products or services at the exhibition”*. For example, at a restaurant industry show, exhibitors might include food distributors, restaurant machinery distributors, restaurant and cooking schools, companies that produce specialty cooking ingredients, and so on. Apart from that, exhibitors are responsible for making the decision to participate at any show. They will make the decision whether to attend the exhibitions by considering the effects attending will have on the companies’ image during the exhibition (Kang & Schrier, n.a.). In addition, the quality of the exhibitors directly affects the quality of the exhibitions, therefore the venues and organizers must check if the exhibitors display the right products in the right manner in order to achieve success for the exhibitions.

### **2.2.2 Exhibition Venue**

The exhibition venues are very important stakeholders in exhibition industry because they are the necessary for holding the exhibitions (Yichen, 2010). They provide the space and facilities that are necessary for organizing the exhibitions such as audio-visual, IT and communication technology, and other support facilities (Thailand Convention and Exhibition Bureau, 2011e). Because of the increasing number of exhibitions, the venues need to have unique selling points such as size, facilities, location, or CSR policies to attract the consumers (Yichen, 2010). Moreover,

human resources who implement the operation policies and have professional experiences in exhibition management, like venue manager and operation staff, are needed (Thailand Convention and Exhibition Bureau, 2011e). Therefore, the exhibition venue in this study does not only refer to the place for organizing and holding the exhibition, but it also refers to the staff who work for the venue.

The previous literature has showed that the exhibition venues have significant power and influence among their customers because they get involved in every stage of the exhibitions (Yichen, 2010). For examples, in the pre-stage, the venues and their customers, such as exhibitors, must discuss the operation policies of the venues and sign an agreement regarding the details of duties and obligations of both parties. Apart from that, the venues play important roles in controlling the energy consumption, such as electricity consumption in display booths, during the exhibitions and managing the waste management after the exhibitions (Yichen, 2010). Therefore, the exhibitors must follow the regulations and operation policies of the venues when exhibitors exhibit their goods and services in the venues.

Consequently, this study intended to explore the perceptions of exhibitors toward the practice level of exhibition venues regarding their green policy because the exhibitors are end-users of the venues.

### **2.3 Environmental Impact of Exhibition**

Among the four sectors of MICE industry, exhibition industry is the one that has significance in terms of economics as well as environmental impact. Globally, the exhibition industry contributes to sustainable economic growth and prosperity through trade in goods and services, taxation and job creation. This is mirrored in the impact individual centers have on local development through the use of local resources and the management of the local environment (UFI, 2009).

In the view of the Environmental Protection Agency (EPA), the meeting and exhibition industry represents the second most wasteful industry in America behind only the construction and demolition industry because of several stages involved in the planning and implementation of an event (Chiou, 2011; McKye, 2009; Trade Show Advisor, 2013). In the pre-event process, they require a large

consumption of paper and office products in order to promote and advertise the events, while they require a large consumption of energy during and post-event for their transportation, decoration, and waste disposal because of the huge amount of items used. Another major problem is meetings and exhibitions encourage people to travel and, therefore, burn more fossil fuels.

Specifically, exhibitions have the potential to negatively affect the environment. Because of the nature of exhibitions that are held within a short period of time based on a temporally purpose and pull a huge number of people together in the same areas and at the same time, there are many environmental issues involved while conducting those exhibitions. The major areas of impact of exhibitions are resources and energy consumption, traffic and transportation, and waste production (Chiou, 2011; Jones, Pilgrim, Thomson, & Macgregor, 2008; Zamzuri, Awang, & Samdin, 2011). They use a significant amount of energy and resources for their exhibits and decorations which generate large amounts of waste after exhibitions, especially the display booths (Kim, Terazawa, Huruya & Shiraishi, 2002). In the U.K., one estimate suggests that exhibition waste exceeds one million tons annually, which leads to the increase of energy usage for waste disposal (Chiou, 2011). Traffic and transportation is such a significant issue for organizing the exhibitions. The increase in traffic congestion due to the transportation of goods and participants put pressure on road infrastructure for host cities and creates parking problems as well as great amounts of carbon emissions. For example, at an event in the United States, a 500-stand exhibitions associated with a conference attended by 8,100 visitors emitted over eight million tons of carbons into the atmosphere (Kent, 2006). Other environmental factors include water usage and the products and services purchased to produce the show. Food and beverage service and restroom usage are the larger contributors to the water usage during an exhibition (Chiou, 2011; Jones, Pilgrim, Thomson, & Macgregor, 2008; Kent, 2006).

## **2.4 Environmental Movement**

According to the United Nations (2014), the environmental movement began in the nineteenth century as a response to industrialization. In 1962, scientists

stressed the need to respect the ecosystem in which we live, in order to protect human health as well as the environment regarding the heavy agricultural use of synthetic chemical pesticides. In 1969, the responsibility to protect the health and well-being of the ecosystem began to dawn on the collective consciousness of the world and its highest ideals and visions began to be translated into practical form at the end of the 1960s, which has now become a global phenomenon.

As universal concern about the healthy and sustainable use of the planet and natural resources continued to grow, in 1972 the UN first took action to convene the United Nations Conference on the Human Environment in Stockholm. It was a landmark event in addressing the need to inspire and guide the peoples of the world in the preservation and enhancement of the human environment. At the Conference, the United Nations Environment Programme (UNEP) was created and became the world's leading environmental agency. Its current priorities are environmental aspects regarding disasters and conflicts, ecosystem management, environmental governance, harmful substances, resource efficiency, and climate change.

In 1983, the UN established the World Commission on Environment and Development. In 1987, the Commission adopted the concept of sustainable development as part of the environmental issues and human development. The wide-ranging recommendations made by the Commission led to the holding of the United Nations Conference on Environment and Development. Based on its conclusions, the public agenda, which became known as "Agenda 21", a blueprint for the protection of our planet and its sustainable development was issued. Later, Agenda 21 was adopted by the "Earth Summit" in Rio de Janeiro in 1992. Consequently, by 1992 the link between environment and development, and the imperative need for sustainable development was seen and recognized worldwide.

In Agenda 21, governments outlined a detailed blueprint for action that could move the world away from its present unsustainable model of economic growth towards activities that would protect and renew the environmental resources on which growth and development depend. Areas for action included protecting the atmosphere, combating deforestation, soil loss and desertification, preventing air and water pollution, halting the depletion of fish stocks, and promoting the safe management of toxic wastes (United Nations, 2014).

## 2.5 Green Concept in MICE

When the word “green” is applied to the context of the business industry, it means ‘the business that attempts to have a positive impact on the environment and community’ (EarthShare, 2012). It develops and practices business strategies that go beyond regulations and demonstrate commitment to a healthy and sustainable future. It adopts principles, policies, and practices that improve the quality of life for its customers as well as employees.

Green concept in Meeting, Incentive, Convention, and Exhibition (MICE) industry is generally known as “Green Meetings” which is identified by Convention Industry Council or CIC (2004) as “*an event that incorporates environmental considerations to minimize its negative impact on the environment*”. Thailand Convention and Exhibition Bureau or TCEB (2009a) adopted this definition and added to its own as “*an event that incorporates the environmental considerations throughout all stages of the event process in order to minimize the negative impact on the environment and make a positive impact to host communities in terms of environmental and social legacies*”.

According to the concept of sustainability, all stakeholders also have responsibility to maintain the balance of environment, economics and society (triple bottom line). Therefore, Greening the World Summit on Sustainable Development (GWSSD) mentioned that “*an event can be considered “green” when it is designed, organized, managed and staged in accordance with sustainability principles*” (Katzel, 2007). This is similar to Laing and Frost (2010), who stated that Green Meetings means “*an event that has a sustainability policy or incorporates sustainable practices into its management and operations*”.

The core of green concept in MICE industry falls into five major categories including waste, carbon emissions, transportation, food and beverage, and communication, where paper and electricity usage are addressed as consistently as other two categories (Linden, 2010). The green concept is applied by convention and exhibition venues, organizers and other players, and implemented into their management strategies (Katzel, 2007). They apply the environmentally best practices in the areas of selection of destination, accommodations, event venue and transportation, food and beverage, convention and exhibition production, and

communication and marketing, which intend to eliminate or reduce waste, pollution, chemicals, and increase the utilization of resources (Convention Industry Council, 2004; DeSilets & Dickerson, 2008; Laing & Frost, 2010; Thailand Convention and Exhibition Bureau, 2009a).

Environmental protection is not only a benefit because of the implementing the green concept, but it is also about economic benefits. In fact, many environmental activities performed by MICE players can actually save money. Moreover, it can create and enhance competitive advantages and reputation, as well as present positive opportunities for marketing approach once the green initiatives are incorporated into their unique selling points which can improve their public relations and demonstrate a commitment to corporate social responsibility through both local and international markets (Convention Industry Council, 2004; Obritzhauser, 2011; Thailand Convention and Exhibition Bureau, 2009a).

In order to achieve the objective of Green Meetings, all players including convention and exhibition venues, organizers and other suppliers need to have the same commitment and agreement on the mutual benefits. This can be done by collaboration in sharing knowledge, training personnel and integrating sustainability as part of the measurement of their success (Laing & Frost, 2010).

## **2.6 Green Exhibition**

Accordingly, the concept of Green Meetings covered all sectors in MICE industry including exhibition industry. Therefore, Green Meetings in this context will be called “Green Exhibition” which refers to *“the exhibition that integrates environmental responsibility by adopting the best policies and practices for environment into its management and operation process in order to minimize the negative impact on environment”*.

The concept of green exhibition has been in the exhibition industry for several years and there are many concerned organizations in exhibition industry such as the Convention Industry Council (CIC); UFI, the Global Association of the Exhibition Industry; and the International Association of Exhibitions and Events

(IAEE) play an important role to drive the exhibition industry to the green direction at an international level.

The Convention Industry Council, or CIC, is an American organization based in Alexandria, Virginia. CIC's mission is to provide a forum for member organizations to exchange information on global trends and topics, proclaim excellence in best practices and guidelines, collaborate on industry issues and support the value of the meetings, exhibitions, and events industry (Convention Industry Council, 2010).

According to a green initiative, in 2003 CIC collaborated with the World Travel Organization, hotels, convention and visitors' bureaus, convention centers, and meeting-planning organizations in the U.S. to form the Green Meeting Task Force. This Task Force was charged in order to create the guidelines for stakeholders involved in the meetings, exhibitions, and events industry. Finally, the minimum best practices for event organizers and suppliers on producing environmentally sustainable events were published in 2004 (Convention Industry Council, 2004). The best practices of CIC were not adopted by stakeholders in MICE industry in only the U.S.; they were also used as a model for Thailand Convention and Exhibition Bureau (TCEB) to develop the guidelines for MICE industry in Thailand as well.

Later, the Global Association of the Exhibition Industry became the Union of International Fairs (UFI), which is the association of world's leading trade show organizers and fairground owners and selected partners of the exhibition industry, as well as the major national and international exhibition association. UFI plays the role to represent, promote and support its members and the exhibition industry worldwide by promoting an efficient networking platform where professionals of the exhibition industry can exchange ideas and experiences. Moreover, UFI offers educational training opportunities and a variety of professional seminars and also deals with issues of common interest for its members within the framework of regular meetings of its regional chapters and working groups (UFI, 2014a).

In order to achieve a high-level of member awareness and commitment to promote social and environmental responsibility within the exhibition industry, UFI adopted the concept of sustainable development in June 2008 and established the UFI Committee on Sustainable Development to serve its members by promoting,

encouraging and supporting sustainability within the exhibition industry, thus becoming a reference point for best practice, tools, standards and learning. The Committee is composed of representatives from the industry including venues, organizers, service providers, and national associations from Asia, Europe, the Middle East, North America and Pacific regions (UFI, 2014b).

UFI has been involved in the development of several sustainable development guidelines, such as in June 2012 UFI was involved in the development of a Management System Specification Standard for Sustainability in event management or ISO 20121. ISO 20121 is a method of working which helps the venues and service providers consider how to meet the needs of the sustainable development in events without compromising the ability of future generations to meet their own needs at every business decision point.

Moreover, UFI as a member of the advisory group was involved in the development of the GRI (Global Reporting Initiative) sustainability reporting guidelines and event organizers sector supplement. It is a guidance document that enables event organizers to provide qualitative and quantitative information on their sustainability performance. The first set of guidelines was launched in January 2012 and is applicable to the entire event industry. A year later, a working group of UFI's Sustainable Development Committee developed a simplified version of the GRI sustainability reporting guidelines dedicated to the exhibition industry and released this adaptation in June 2013 (UFI, 2014c).

Additionally, the International Association of Exhibitions and Events (IAEE) is a trade association established to promote the growth and expansion of the worldwide exhibition industry. This includes professionals who organize, conduct, and support trade shows, exhibitions, meetings, and events at private and public venues. IAEE intends to educate and influence its member organizations in achieving economic and strategic goals while minimizing adverse environmental impact of the events they produce (Thailand Convention and Exhibition Bureau, 2014).

The IAEE Committee on Environmental Responsibility identifies resources and develops best practices that address how to minimize the environmental impact of events globally. These documents will serve as references to develop comprehensive resources that will assist exhibition, event organizers and suppliers in

the industry in creating more environmentally-friendly or “Green” events. Additionally, organizations can adjust their administrative practices in very simple ways to reduce the environmental impact of their office operations on the environment (International Association of Exhibitions and Events, 2014).

## **2.7 Green Exhibition in Thailand**

For several years, various organizations in both public and private sectors in every industry have been alerted and interested in environmental conservation by using “green” concept or environmental consciousness as an organizational policy relative to Corporate Social Responsibility (CSR). Thailand Convention and Exhibition Bureau or TCEB is a public organization that supports Meeting, Incentive, Convention, Exhibition, or MICE industry, in Thailand also recognizes the significance of environmental conservation for exhibition industry.

As part of introducing the green concept to Thailand’s exhibition industry, TCEB plays an important role in encouraging Thai exhibition players and representatives from various sectors to be active in all aspects of green exhibition. For instance, TCEB encourages exhibition players such as exhibition venues to reduce electric power and energy consumption, reduce paper usage, use recycled and natural materials, and encourage the visitors or exhibitors to travel by public transportation. In addition to reducing long-term expenditures, TCEB promotes the green exhibition concept to exhibition players as an effective marketing strategy that can boost business opportunities by drawing buyers and enhancing corporate image on social and environmental responsibility. TCEB also encourages the consumers, especially government agencies, to adopt green exhibition concept into their procurements such as by selecting the environmental friendly venues for their exhibitions. In addition, TCEB collaborates with other associations in both public and private sectors to provide education to general public regarding green concept. This can indirectly force the exhibition players to adjust their operations to meet the needs of consumers (Thailand Convention and Exhibition Bureau, 2010c; Thailand Convention and Exhibition Bureau, 2011a).

All of these efforts are implemented under the 'Go Green Exhibition' campaign, which TCEB emphasizes this project as a new selling point and strategy to highlight environmental conservation theme and promote Thailand as a global exhibition destination when compared to other key competitors in this region (Thailand Convention and Exhibition Bureau, 2009c). This is because of green exhibition concept is actively practiced in overseas countries, particularly in European nations. Notably, exhibition players increase the green measures when consumers make the environmental issue a major factor when selecting the exhibition venues or attending the exhibitions. Therefore, TCEB intends to make Bangkok a true exhibition city of ASEAN as the ASEAN region moves towards full integration by 2015 (Thailand Convention and Exhibition Bureau, 2011a).

At the same time, TCEB cooperated with Thailand Environmental Institute, Green Leaf Foundation, Thai Exhibition Association, Thailand Incentive and Convention Association, as well as MICE entrepreneurs to develop 'Thailand's Green Meetings Guideline'. The guideline contains basic principles that are practical for MICE players, including exhibition players, to operate the exhibitions under the concept of avoid, reduce and reuse. In this regard, TCEB supports the exhibition players that meet the green exhibition standards by providing a budget for marketing and public relations activities, certification and match-making for an organization that is looking for green exhibition (Thailand Convention and Exhibition Bureau, 2009d; Thailand Convention and Exhibition Bureau, 2009e; Thailand Convention and Exhibition Bureau, 2011a).

TCEB continually supports green exhibitions in Thailand by setting up a national board to develop the 'National Environmental Strategy for the Exhibition Industry'. This strategy intends to promote environmental best practices within the industry and market the position of Thai exhibition industry in global context under the 'Green Branding' concept. The Cleaner Technology concept was applied together with other management practices including marketing, human resources, and utilization of natural resources in order to reduce the negative environmental impact and operation costs. All of these practices also benefit Thai exhibition players as a fundamental preparation for other international standards. In order to achieve the objective of the strategy and encourage exhibition players to adopt green policies into

their operations, TCEB set up the 'Go Green Exhibition Award' program, which invited exhibition venues, organizers, and suppliers to submit their business plans to compete for the award. The winner will receive support from TCEB as 'Green Organization' model in presenting and promoting their plans at international level. At present, there are more than 35 organizations in exhibition industry participating in this project (Thailand Convention and Exhibition Bureau, 2010a; Thailand Convention and Exhibition Bureau, 2010b).

In addition to TCEB, Thai Exhibition Association or TEA is another organization that takes action regarding green exhibitions. As mention above, TEA collaborates with TCEB and other associations to work on Thailand's Green Meetings Guideline and encourages exhibition players, such as exhibition venues and organizers, to improve their operations in accordance with the guideline. Furthermore, TEA also supports TCEB to setting the green exhibition policy for Thailand's exhibition industry and encourages Thai exhibition players to meet environmental conservation standards (Thailand Convention and Exhibition Bureau, 2009d; Thailand Convention and Exhibition Bureau, 2009e; Thailand Convention and Exhibition Bureau, 2010c).

With the campaign 'Green Management on Exhibition Project', TEA intends to educate and raise awareness of environmental conservation among Thai exhibition players, especially exhibition venues. Bangkok International Trade & Exhibition Centre (BITEC) and IMPACT Arena, Exhibition and Convention Center are the first two members that responded to the project and implemented this concept into their operation practices (PITON Communication, 2009a). TEA together with 80 members continued the Green Management on Exhibition Project by launching the 'TEA Green Exhibition Education Trip' to study and observe the environmental management at Royal Cliff Beach Resort Pattaya and Pattaya Exhibition and Convention Hall (PEACH) after they won the award for the outstanding organization in environmental management from the Ministry of Natural Resources and Environment. The objective of this project is to provide the opportunity for association members to learn the best practices of environment management in order to apply the ideas into their operations (PITON Communication, 2009b).

## 2.8 Green Exhibition Guideline

The green concept is increasingly and extensively acknowledged within MICE industry, which leads to the development of guidelines for event venues, event organizers and other suppliers to implement, maintain and improve the sustainability throughout all working processes. However, a single guideline cannot fit to every sector of a business event. Therefore, the concerned institutions in every country around the world established their own guidelines whereby different guidelines were developed for each segment of event industry. As examples, Sustainable Sport and Event Toolkit (SSET/AISTS) for athletic and sporting events sector, Convention Industry Council (CIC) Green Event Best Practices for conferences and meetings sector, and Live Earth Green Event Guidelines for concerts and performances sector (Linden, 2010). Additionally, Thailand as a leader of Green MICE in Asia (Thailand Convention and Exhibition Bureau, 2010d) also has developed 'Thailand's Green Meetings Guideline' which is created by Thailand Convention and Exhibition Bureau or TCEB (Thailand Convention and Exhibition Bureau, 2009a).

For this study, base on Thailand's context, Green Meetings Guideline by TCEB will be used as a basis for measurement. TCEB's Green Meetings Guideline provides the best practices for all sections in MICE industry including meeting, incentive, convention and exhibition industry. Hence, in this study, Green Meetings Guideline will be called 'Green Exhibition Guideline', which refers to "*a principle that determines the practices regarding the exhibition which intends to minimize the negative impact on the environment*".

In order to standardize the green exhibition in Thailand, Thailand Convention and Exhibition Bureau (TCEB), the central organization that supports and encourages exhibition players to meet the environmental standards, established the 'Green Exhibition Guideline' as a tool for exhibition players to follow in order to conduct their exhibitions. The guideline intends to heighten the environmental awareness of exhibition players and demonstrate the advantages of conducting environmentally responsible events (Thailand Convention and Exhibition Bureau, 2009a).

The beginning of Green Meetings Guideline was started by the launching of 'Green Survey' by TCEB to collect information from MICE players in Thailand

with the intention of minimizing the environmental impact of event operations. With the collaboration of TCEB, Thailand Environmental Institute (TEI), Green Leaf Foundation, Thai Exhibition Association (TEA), Thailand Incentive and Convention Association, and Thailand's business event operators, the collected information was utilized in the guideline and the Green Meetings Guideline was launched in 2009. The guideline provides criteria for exhibition players to implement green exhibitions. In addition, exhibition players who follow the guideline will be supported by TCEB in terms of education and promotion, such as inclusion on the green recognition list.

The guideline covers eight areas of convention and exhibition management including convention and exhibition venues; accommodations; transportation for delegates, exhibition visitors, tourists, and equipment; food and beverages; convention and exhibition production; communication and public relations; token and souvenirs; and general office procedures. Furthermore, each area is categorized by the valuable resource usage, waste and pollution reduction, and chemical reduction guideline.

In organizing the exhibitions, literally tons of materials are incorporated into the exhibition including exhibit booths, carpeting, collateral materials, give-away and souvenirs, etc., which become large amounts of waste after exhibitions (Kellen Meetings, 2011). In fact, the exhibition industry is the second largest producers of waste, behind the construction industry, which generates 600,000 tons of garbage every year, especially the exhibit booths, unread brochures and useless souvenirs (Kim, Terazawa, Huruya, & Shiraishi, 2002; Schueneman, 2012). Moreover, the exhibitions require a large consumption of energy during and post-event for holding the events and waste disposal because of the huge amount of items used.

However, the exhibition industry tries to reduce that huge amount of yearly waste because the environmental issues have become a core value for many business sectors, and paper and plastic are the most obvious first line for attacking. Schueneman (2012) noted that many exhibitions increasingly used eco-friendly booths made from recycled material and increasingly offered electronic information instead of distributing pamphlets and brochures advertising exhibitors' products and services.

Therefore, this study focused mainly on three major areas related to the exhibition, which generated the most negative impact on the environment, including exhibition production, communication and public relations, and souvenirs distribution.

### (1) Exhibition production

Exhibition production is the process of producing the exhibition. In this area, TCEB guides the exhibition venues to, for examples, reduce electricity use in the booths; decorate the venue with green shrubs and/or potted plants instead of floral decorations to reduce waste and reuse them in future events; prepare waste bins for recycling garbage; reduce usage of foam construction on stages and area decorations; and select recyclable materials or reusable materials from previous events, for instance carpeting, exhibition boards, and system booths.

### (2) Communication and public relations

Communication and public relations in this study means the methods of promoting and advertising the events to the public in pre-event process or distributing the information regarding exhibitors to visitors during the events. In this area, TCEB recommends the exhibition venues to, for instance, design an environmental friendly medium to promote the event; consider a plan to reduce paper usage; and promote using recycled paper for handbills and brochures. Moreover, TCEB also encourages the exhibition venues to use information technology (IT) to promote the event. For examples, TCEB guides the exhibition venues to promote the event through the use of event's website, emails to members, e-newsletter through the organization, and SMSs to mobile phones; and use LCD screens as a medium for public announcements to avoid using handbills and brochures as well.

Based on the green concept, Information Technology (IT) that supports the goal of sustainability is referred to as green IT (Watson, Boudreau, Chen, & Huber 2008). IT refers to both hardware and software used to store, retrieve and manipulate information. The revolution of IT has evolved the way humans communicate, where humans more easily stay in touch with one another with the use of IT. Green IT can range into many focal points and different actions. According to Murugesan (2008), it includes power management, energy efficient practices, data centre design for environmental sustainability, server virtualization, end of IT life like disposing and recycling, uses of renewable energy resources and eco-labeling of IT products. The effect of green IT can be either direct or indirect. For examples, green IT can reduce negative impact of IT on the environment or IT can be used to support other business

initiatives in reducing their negative environmental impact. Therefore, greening IT can lead not only to reduction in carbon emissions, but also to significant cost savings.

### (3) Souvenirs distribution

With respect to souvenirs distribution, TCEB encourages the exhibition venues to avoid distributing souvenirs, but if needed, select useful objects made from recycled materials; use manufactured materials easily found in local area; keep packaging materials for souvenirs to a minimum. Additionally, TCEB also refers to green procurement and eco-design for souvenirs in order to preserve the environment.

According to Thailand Convention and Exhibition Bureau (2009a), green procurement is selection of environmental friendly products such as green label products. Meanwhile, eco-design is a systematic consideration of the design performances with respect to environmental, health and safety objectives over the full product and process life cycle (Fiskel & Wapman, 1994). The role of eco-design, in its traditional meaning, is to reduce the environmental impact of product design during the entire life cycle. It is actually possible to focus on a specific stage of the life cycle such that the environmental impact is minimized at that stage as well as emphasizing the entire life of the product.

## 2.9 Green Exhibition Venue

As mentioned above, the exhibition venue means “the place for organizing and holding the exhibitions including staff who work for that place”, when accompanied by green concept. Therefore green exhibition venue in this study refers to *“the exhibition venue that is concerned about environment and applies the environmental best practices into their policies and operations in order to minimize the negative impact on the environment”*.

Most exhibition venues in Thailand currently apply the green concept into their operation and management policies. Based on the green member lists posted by Thailand Convention and Exhibition Bureau (TCEB), there are 42 organizations including all sectors in MICE industry that state themselves as a green organization (Green Meetings Thailand, 2009). From that number, there are five organizations categorized as exhibition venues including Queen Sirikit National Convention Center

(QSNCC); IMPACT Arena, Exhibition and Convention Center; Bangkok International Trade & Convention Centre (BITEC); Royal Paragon Hall; Pattaya Exhibition and Convention Hall.

In accordance with the limitations of this study, two of the five green exhibition venues based on TCEB's green member list will be introduced in this chapter as the sample of the study.

### **2.9.1 Queen Sirikit National Convention Center**

Queen Sirikit National Convention Center (QSNCC) is Thailand's premier venue for international meetings, conferences and exhibitions; it is renowned for its hospitality, service excellence and the quality of its facilities. With 65,000 sq meters of space, QSNCC is ideal for conferences of up to 5,000 delegates and exhibitions of up to 900 booths, supported by the latest technology, numerous in-house services and a wealth of international management experience. Since its opening in 1991, QSNCC has been managed by N.C.C. Management & Development Co., Ltd., whose experienced team provides a broad range of venue management services for conferences, exhibitions and corporate events. N.C.C. is able to offer clients fully integrated, customer-friendly, one-stop services for food & beverage, booth design and construction, professional conference and exhibition organizing services (Queen Sirikit National Convention Center, 2011b).

Queen Sirikit National Convention Center (QSNCC) has introduced green policy relating to exhibitions by initiated the "Green Venue for Green Exhibitions" campaign. This green policy is aimed to encourage the exhibition organizers, exhibitors, visitors and the general public to utilize natural resources for sustainability. The policy is implemented in the areas of energy, environment, and exhibition production through several activities. For examples, in order to reduce energy consumption within the Center, QSNCC sets air-conditioner thermostats at 25 degrees Celsius and installs sunshield window film to reduce heat throughout the Center. It also installs digital signs to display exhibition room information instead of paper/plastic signage and decorates the exhibition area with ornamental trees and plants rather than flowers in order to improve the environment within the Center. Furthermore, QSNCC organizes training seminars for its employees to encourage

environmental awareness and care among staff members (Queen Sirikit National Convention Center, 2011a).

### **2.9.2 IMPACT Arena, Exhibition and Convention Center**

IMPACT Arena, Exhibition and Convention Center is one of Asia's largest and most modern exhibition and convention center with an usable indoor space of over 140,000 sq meters comprising a variety of venue sizes to meet all types of event requirements. It comprises four large multi-purposed buildings, namely IMPACT Arena, IMPACT Exhibition Center, IMPACT Convention Center and IMPACT Challenger Hall that feature 12 exhibition and convention halls, one arena hall, two large ballrooms, two banquet halls and 52 breakout rooms. The venue also offers a wide range of seven restaurants and 30 international dining outlets. The five outdoor and two indoor parking areas can accommodate more than 20,000 vehicles. IMPACT is a Customer Led venue that offers the flexibility, size and the integration of facilities and services to deliver one stop and total solutions to customers with an array of professional and valued added services ranging from floor space consultations, event management, operations, F&B catering, travel and logistic to even sales and marketing (AseanAffairs, 2012; IMPACT Exhibition Management, 2010a).

IMPACT ensures being a safe venue for everyone and every event by accreditation with the MICE Security Management System (MSMS) or so-called TIS 22300 (IMPACT Exhibition Management, 2010c). Additionally, IMPACT has ongoing efforts to develop and maintain a modern and progressive venue that provides customers and their delegates with a world-class destination. In 2012, IMPACT reached two important milestones by attaining the ISO 22000 Food Safety Management Standard, which reflects the commitments of its in-house catering team to adhering to high international standards of food safety and food hygiene, providing first class F&B catering and services for customers. As an industry leader in Thailand, IMPACT is also committed to educating customers in adopting green and environmental friendly solutions and doing its best to preserve the environment. IMPACT is now becoming the first exhibition and convention centre in Thailand to attain the ISO 50001 Energy Management Standard, which intends to reduce energy consumption and carbon footprint (AseanAffairs, 2012).

In accordance with its commitment regarding environmental conservation, IMPACT announced its new green policy to respond to today's environmental needs under the name "I AM 3R" (Incite, Avoid, Modify, Reduce, Re-use, and Recycle). This policy encourages all people in the venue to have an environmental awareness by avoiding use of ecologically unfriendly materials and toxic products as well as modifying use of materials and waste into new resources and products. All of these policies are implemented through 3R (Reduce, Re-use, and Recycle), which is an environmental management that focuses on the reduction of energy and resource consumption, reusing materials and recycling waste. For example, the roofs of all IMPACT buildings are painted with ceramic colors reflecting the sunlight, which helps reduce the heat in the building. It reuses the signage, tablecloths and chair covers from previous exhibitions as well as turns the leftover vegetables and fruit peels into microorganisms for use instead of chemical substance in wastewater management and to spray on plants (IMPACT Exhibition Management, 2010b).

## **2.10 Green Practices**

In general, business practices involve translating the goals and objectives of a policy into an operation or ongoing program. It is the process of the adopted policies being put into effect (Lineberry, 2013). Therefore, green practices in this study refer to the implementation of policy into actual operation regarding the organization's environmental commitment.

Green practices in MICE and hospitality industry can be mainly traced back to the concept of sustainability where the industries take responsibility for the impact they have on the environment and contribute to sustainable development for the betterment of society. Apart from a reduction in carbon emissions, the adoption of green practices by MICE and hospitality industry result in economic benefits, competitive advantages and innovations, customer satisfaction and loyalty for the industry (Chou et al., 2012).

The results of green practices can affect the green business's performance; that is the interaction between the business and the environment such as the reduction in the use of water, energy, non-renewable resources, and waste emissions (Olsthoorn

et al., 2001; Wagner & Schaltegger, 2004). The green practices survey of the U.S. Bureau of Labor Statistics in 2012 found that the most common green practices of businesses were the improvement of energy efficiency (57%), followed by creation of fewer waste materials (55%). Meanwhile, the least common green practice (2%) was generation of electricity, heat or fuel from renewable sources primarily for use within the workplace (Johnson, 2013).

## **2.11 Factors Affecting Green Practices**

Due to the limited number of green exhibitions-studied, the review of literature in this topic will be discussed in general context within MICE and hospitality industry.

Environmental consciousness is currently in the interest of every industry and business sector. Many of them have adopted the green concept into their policies in order to reduce the impact on environment from their operations (Marcomn, 2009). However, Laing and Frost (2010) noted that green concept now is being used as a marketing tool rather than for the protection of the environment. Some convention and exhibition venues promote themselves by advertising special awards they had received from green organizations such as Perth Convention and Exhibition Centre, which had received Green Globe Benchmarking or Melbourne Convention Centre, which had received green rating for their facilities. Furthermore, Laing and Frost (2010) noted that some event organizers used the green convention and exhibition venues in order to consistently express their green statement as well. Based on the results of their observation at three events, they found a tendency for a disconnection between green policy and actual operational practice with respect to events, particularly the rubbish disposal practices. All events emphasized green featured in the marketing, but one of them did not separate the rubbish for recycling; one of them introduced recycling bins, but did not provide for non-recycling bins, thus all rubbish was put together in the recycling bins; and one of them encouraged recycling and had an education agenda aimed at changing patterns of behavior, but the catering contractors threw all their rubbish in one bin. It implied that some event organizers lack an awareness to

implement green policy into practice and do not see the importance of consistent of green practices.

Additionally, Paterson and Ward (2011) stated that the barriers to implementing sustainable practices within the event industry seem endless and one major barrier is a lack of understanding and organizational apathy. They suggested that providing a practical understanding of some approaches toward adherence to sustainable principles would reduce the myths and prejudices that exist. Therefore, it is necessary to provide a linkage from policy to practical implications in order to bridge or minimize the gap between green policy and practice.

In the hospitality context, as reported by Green Flag project (Desprez, 2001) which studied the barriers and drivers of energy efficiency use in SME hotels, environmental concern and willingness to act are strongly dependent on the hoteliers' attitude and knowledge. They found that if hoteliers are interested in ecological matters, they may go rather far in implementing all types of environmentally friendly measures. On the other hand, hoteliers who are not interested in environmental protection can hardly be targeted through a labeling initiative.

Kaufmann, Panni and Orphanidou (2012) mentioned that environmental concern is a strong attitude towards preserving the environment, wherein attitudes are defined as the enduring positive or negative feeling about some person, object, or issue. Therefore, it refers to the positive or negative feeling a person has about preserving the environment. They also defined environmental knowledge as a general knowledge of facts, concepts, and relationships concerning the natural environment and its major ecosystem. In other words, environmental knowledge involves what people know about the environment, key relationships leading to environmental aspects or impacts, an appreciation of whole systems, and collective responsibilities necessary for sustainable development. They noticed that most people do not know enough about environmental issues to act in an environmentally responsible way.

In addition, the ShMILE – Sustainable hotels in Mediterranean Islands and area, is another project that reported the barriers affecting implementation of the EU Eco-label in order to reduce energy consumption in hotel business (ShMILE, 2006). This work resulted in a framework of factors affecting implementation of environmental measures. Those barriers included difficulty of implementation in an

existing accommodation structure; inflexible organization; need for specific skills and qualified persons for maintenance; large amounts of personnel time for implementing, training and maintenance; and high investment costs.

Based on previous studies, this study categorizes factors affecting green practice level into two groups. The factors in the first group are under the responsibility of exhibition venues including the investment costs, time consumed for policy implementation, the maintenance costs, the requirement of specific skill and qualified persons, the training costs, time consumed for training, and the consistency of implementation. For the second group, the factors consist of the knowledge regarding environmental preservation, a positive attitude toward environmental preservation, a clear understanding regarding green policy, an awareness to implement green policy, and the enthusiasm to implement green policy, which are under the responsibility of staff.

## **2.12 Empirical Study Related to Exhibitors' Demographics and Green Practice Level**

Based on the study of Smith and Perks (2010), type of business is used to establish the relationship between the perceptions of green practice implementation and the business functions. The study found that the perceptions regarding the green practice implementation in the finance and information technology functions are related to the type of business. Nakao et al. (2007) also found that the relationship between corporate environmental performance and corporate performances depends on the type of industry. In studying the perceived relationship between the environment and business practices, Schmidheiny (1992) found that large companies are obviously taking action relative to environmental consciousness. Meanwhile, Merrilees and Marles (2011) found a difference between large and small hotels in adopting green policies and practices where large hotels had more potential to go green than small hotels.

Moreover, the number of times exhibited in the exhibition was used by Jin, Weber and Bauer (2012) to compare the perceptions of green quality of exhibitors who exhibited for the first time at a particular exhibition with repeat exhibitors and

found that the first time exhibitors rated all green dimensions lower than repeat exhibitors did. The study of Singhal (2012) found that firms who participate in green associations adopted higher green supply chain initiatives than firms that do not participate. From these associations, firms learn principles and standards of green initiatives as well as benefits and values of such initiatives, which increased the level of awareness of green issues between organizations and level of adoption.

Although a study of demographic variables could assist in explaining what constitutes a green business (Ferraro, 2009), limited research has been done to assess the influences of demographic variables on green practice implementation (Gilg, Barr, & Ford, 2005). However, Chitra (2007) recommended that the influence of demographic variables on green practices should be investigated because of the rapidly growth in the trend of environmental consciousness and the increasing awareness of green business practices. Because of this, every business sector, both new and old companies, are increasing adopting the green concept into their operation policies (Marcomm, 2009).

Therefore, the following demographic variables of exhibitors are used in this study in order to establish the relationship between exhibitors' demographics and green practice level of exhibition venues and the relationship between exhibitors' demographics and factors affecting green practice level of exhibition venues. They are: number of times exhibited, type of business, size of company, age of organization, type of organization. Furthermore, the green policy of company and the familiarity with green exhibition guideline are used to investigate the influence of exhibitors' demographics on green practice level of exhibition venues and factors affecting green practice level of exhibition venues as well.

### **2.13 Empirical Study Related to Factors Affecting Green Practice Level and Green Practice Level**

Investment in environmental practices may be the result of a large set of factors and motivations, these motivations may be related to cost reductions or revenue increases and eventually lead to increased business performances (Ambec & Lanoie, 2008). Previously, businesses assumed that incorporating 'green' into their

business strategy would cost money. In other words, the high initial costs for the transition to green growth appeared to be beyond the reach of many organizations (Hynes & Wang, 2012). However, many businesses now realize that ignoring negative impact on the environment will be costly in the future (Van der Zee, 2008). Consequently, sustainability has become a major focus for businesses as it was discovered that sustainable practices could strengthen reputation, improve employee morale, lead to cost savings and benefit the environment (Verdiem Corporation, 2008).

Energy conservation is one of the first steps that many companies have taken to reduce their environmental impact as it often leads to cost reductions (OECD, 2010). The International Energy Agency (IEA) estimated that the 17% increase in energy investment between the years 2010 and 2050 would yield cumulative fuel savings equal to 112 trillion USD (IEA, 2010). However, with challenging economic conditions still existing in many markets, hoteliers often lack the time and resources to properly evaluate the business costs and benefits of investing into environmental technologies and sustainability initiatives. Therefore, HVS contended that these potential investments require the same pragmatic, analytically based evaluation as any other business decision, which focuses on the minimization of risk and optimization of return on investment (Goldstein et al., 2012).

Furthermore, Paille et al. (2013) showed that organizations concerned with the protection of the natural environment could not act without the support of their staff. In hotel industry, a positive correlation was found between green practices and hotel employees' organizational commitment. This finding indicated that hotels could enhance their employees' commitment to the company by implementing successful green practices (Society for Human Resource Management, 2007). This positive relationship between green practices and employees' organizational commitment may provide a valuable human resources management perception. Hotels may use green practices to enhance their positive brand image to their employees and to motivate their participation in the practice at the workplace.

The conceptual framework and null hypotheses tested in this study are outlined in the next section.

### 2.14 Conceptual Framework

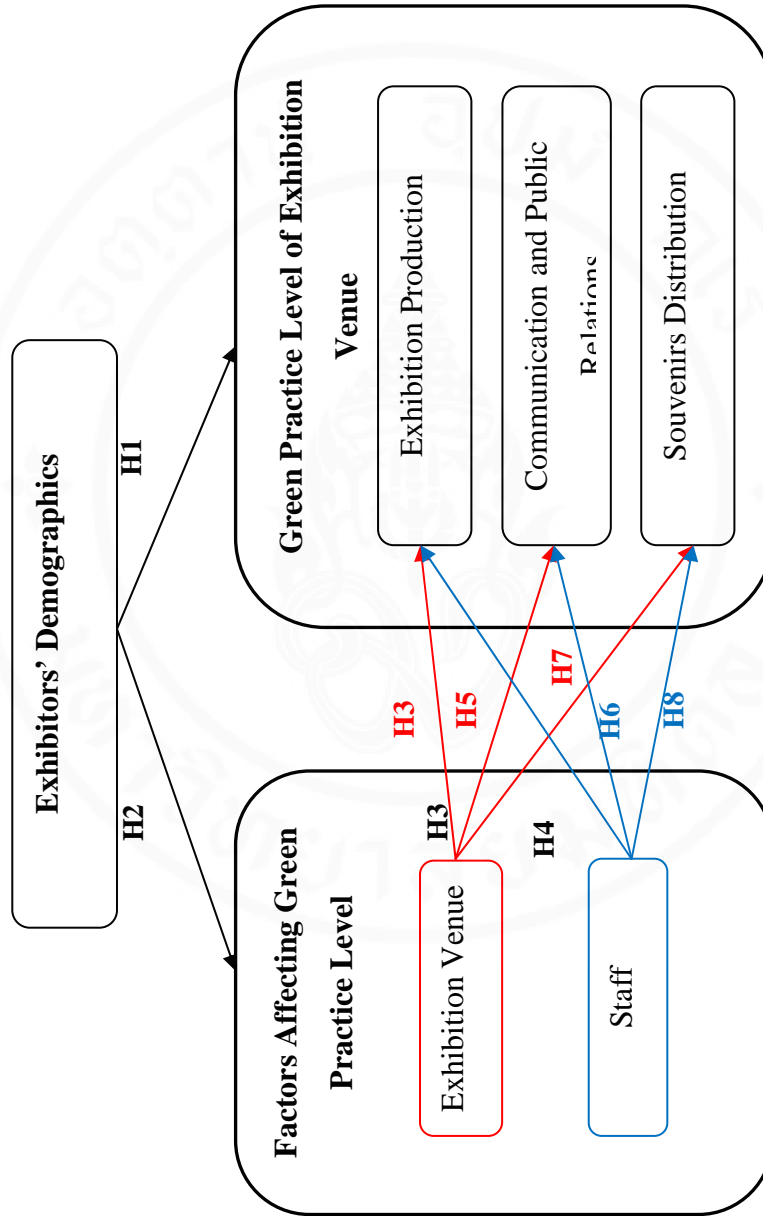


Figure 2.1 Conceptual Framework

## 2.15 Hypothesis

In relation to research questions and conceptual framework, the research hypotheses have been set as follow:

**Hypothesis 1:** Exhibitors' demographic has significant influence on green practice level of exhibition venue

**Hypothesis 2:** Exhibitors' demographic has significant influence on factors affecting green practice level of exhibition venue

**Hypothesis 3:** Exhibition venue has significant influence on green practice level regarding exhibition production

**Hypothesis 4:** Staff has significant influence on green practice level regarding exhibition production

**Hypothesis 5:** Exhibition venue has significant influence on green practice level regarding communication and public relations

**Hypothesis 6:** Staff has significant influence on green practice level regarding communication and public relations

**Hypothesis 7:** Exhibition venue has significant influence on green practice level regarding souvenirs distribution

**Hypothesis 8:** Staff has significant influence on green practice level regarding souvenirs distribution

## **CHAPTER III**

### **RESEARCH METHODOLOGY**

This chapter presents in detail how the study was conducted in order to fulfill the following research questions:

- 1) What is the green practice level of exhibition venues in Thailand relative to TCEB's Green Exhibition Guideline?
- 2) What are the factors affecting green practice level of exhibition venues in Thailand?

The discussed topics in this chapter include research approach and design, target area and population, sample selection, sample size, survey instrument, data collection, data analysis, and validity and reliability assessment.

#### **3.1 Research Approach and Design**

The objectives of this study propose to examine the green practice level of exhibition venues in Thailand regarding TCEB's Green Exhibition Guideline and also identify the factors affecting green practice level of exhibition venues from exhibitors' perspectives. In other words, this study intends for the exhibitors to evaluate the performance of exhibition venues according to green exhibition policy and test the hypothesis as the conceptual framework. Therefore, this study employed a quantitative approach and used a questionnaire with closed-ended questions as the instrument to conduct the survey.

As explained by Easter-Smith et al. (1991) and Veal (2005), the quantitative method is suitable approach to work with a large of population where a sufficient sample size is allowed to be selected to represent the entire population. In addition, the results of study based on the sample can represent the entire population as well. Therefore, this study is suitable to be conducted by the quantitative approach in order to quantify the opinions and perceptions of exhibitors, generalize results from

a larger population, and use measurable data to formulate facts and answer the questions of this study (Denscombe, 2007).

In addition, this study decided to use a questionnaire with closed-ended questions as an instrument to conduct the survey because the study was conducted under several restrictions such as the limitation of time and budget. As stated by Milne (1999), generally it is relatively quick to collect information using a questionnaire because the potential information can be collected from a large portion of a group and the responses from questionnaire are gathered in a standardized way.

### **3.2 Target Area and Population**

In accordance with the study objective that intended to examine the green practice level of exhibition venues in Thailand by the exhibitors, this study was desired to be conducted at the green exhibition venues. Referring to the green member lists posted by Thailand Convention and Exhibition Bureau, or TCEB (Green Meetings Thailand, 2009), there are five exhibition venues listed as green exhibition venues. However, to distribute the questionnaire to exhibitors, permission from exhibition organizers is needed. In addition, the period for conducting the survey was limited to two months, June-August 2013. Consequently, this study was conducted at two green exhibition venues, which were:

- (1) Queen Sirikit National Convention Center (QSNCC) and
- (2) IMPACT Arena, Convention and Exhibition Center (IMPACT)

### **3.3 Sample Selection**

This study intends to examine the green practice level of exhibition venues in Thailand by the exhibitors who exhibit their goods and services at the two sample venues during June-August 2013. Because of several conditions and limitations of this study, such as time length and the requirement to obtain the exhibition organizer's permission to distribute the questionnaire, two exhibitions from each sample exhibition venue were studied. That means the questionnaire was distributed to exhibitors from four exhibitions.

### 3.4 Sample Size

In order to make a study meaningful, it is necessary to ensure that the sample size is large enough to be statistically significant. However, large studies are more expensive because of the extra cost of additional participants. This study was conducted with a limited budget, therefore an effectively estimated sample size is needed in order to limit expenses and maximize the results. In order to accomplish this, the study applied the proportion determination to determine the sample size by non-probability sampling method (Yoopetch, 2012a). This study desired a level of confidence of 95 percent with a maximum allowable error within 0.05, and there is no estimation from previous studies.

According to formula,

$$n = p(1 - p) \left[ \frac{Z}{E} \right]^2$$

Where:

n = the size of sample

p = the estimate from a pilot study or some resources, otherwise 0.50 is used

Z = the value for desired confidence level

E = the maximum allowable error

Therefore, the representative sample size for this study will be

$$n = 0.5(1 - 0.5) \left[ \frac{1.96}{0.05} \right]^2$$

$$n = 385$$

As this study was conducted at four exhibitions and the sample size was 385 exhibitors, 97 exhibitors from each exhibition are representative. However, this study decided to distribute 120 questionnaires to each exhibition in order to ensure the return rate from questionnaires achieved the desired sample size. Finally, 394 questionnaires were completed by exhibitors and used to determine their perceptions in order to answer the questions of this study.

### 3.5 Survey Instrument

Because of the large sample size of exhibitors from four exhibitions, this study adopted questionnaires as a tool to collect the data. The use of questionnaire will make it easy to obtain results from a large number of respondents within a short period of time and the closed-end questions will help to scope the results of the study with the specific answer making it easy to analyze the data (Denscombe, 2007).

The questionnaire was separated into three sections including exhibitor's demographics, green practice level assessment, and identifying the factors affecting green practice level as briefly described below:

#### **Section 1:** Exhibitor's demographics

In this section, the respondents were asked general information about the company such as type of business, size of company, number of times attending the exhibition at sample venue. Specifically in this study, the size of company was measured by number of employees, which are divided into three categories based on the Federation of Thai Industries. Therefore, a company with less than 50 employees was identified as a small size, 50 – 200 employees was identified as a medium size, and more than 200 employees was identified as a large size (The Federation of Thai Industry, 2013). The respondents were also asked about their familiarity with any green exhibition guideline.

#### **Section 2:** Green practices level assessment

This section consists of 37 questions that requested the exhibitors to assess green practice level of exhibition venues. The respondents were required to identify the green practice level of exhibition venues compared to TCEB's Green Exhibition Guideline in three areas regarding the exhibition including:

- 1) Exhibition production, 17 items,
- 2) Communication and public relations, 10 items, and
- 3) Souvenirs distribution, 10 items.

### **Section 3: Identify the factors affecting green practice level**

Questions in this section required the respondents to identify the factors that affect green practice level of exhibition venues. Based on the literature review, 12 items were selected for this section, which seven items are factors related to the venues and five items are factors related to the staff.

In addition, the questions in section 2 and 3 applied a seven-point Likert scale in order to assess the green practice level of exhibition venues as well as identifying the factors affecting green practice level. The scale will range from:

- 1) Strongly disagree
- 2) Moderately disagree
- 3) Slightly disagree
- 4) Neither agree nor disagree
- 5) Slightly agree
- 6) Moderately agree
- 7) Strongly agree

### **3.6 Data Collection Process**

The study was conducted at two major exhibition venues; Queen Sirikit National Convention Center (QSNCC) and IMPACT Arena, Convention and Exhibition Center (IMPACT). The questionnaires were composed in Thai language and distributed to 120 exhibitors who attended each of four selected exhibitions during June-August 2013. The data collection was personal distribution to ensure the participants completed all questions, which made the questionnaire usable.

### **3.7 Data Analysis**

The collected data was entered into and analyzed by using the Statistical Package for the Social Sciences (SPSS) program. Firstly, the reliability and consistency of the measurement was tested as the consistency can indicate how well the items measuring a concept group together (Sekaran, 2003). Then, the data analysis

method was used to determine the relative importance and significance of each variable for this study.

Descriptive statistics was adopted to organize, summarize, and present data in an informative way (Yoopetch, 2012b). It is suitable to interpret the ordinal data based on the number of items that request the respondents to rate on an item scale. It usually presents information in a simple form such as mean, median, and mode, as well as compares the data with other categories. In addition, the frequencies and means are commonly the two mostly appropriate methods for describing the interpretation of data (Denscombe, 2007; Veal, 2005). In this study, the descriptive statistics were used to calculate means and standard deviations of exhibitor demographics and frequency distributions for each variable of green practice level and factors affecting green practice level of exhibition venues.

In addition, T-test which is the most commonly used method to evaluate the differences in means between two groups, and the analysis of variance, or ANOVA, which is used for testing whether two or more sample means came from the same or equal populations, was used to test the difference for more than two variables as well (Yoopetch, 2012a). The multiple regression analysis was also employed to analyze the relationships between factors affecting green practice level and green practice level of exhibition venues.

### **3.8 Validity and Reliability**

There are some limitations caused by using questionnaire to collect data such as unclear questions and misunderstanding of the questions that might affect the level of validity and reliability of questionnaire. Therefore, the author conducted a pilot-test before conducting the actual survey in order to ensure the validity and reliability of questionnaire and decrease the potential of errors during the data collection process.

Firstly, 10 questionnaires were pre-tested by face-validity in order to check the level of understanding of the questions as well as the level of user-friendliness of questionnaire. Secondly, 50 questionnaires were used for a pilot-test in order to check the reliability of questionnaire in order to eliminate any unclear questions.

This study employed the Cronbach's Alpha to measure the internal consistency and reliability of scale. Cronbach's Alpha describes the extent to which all the items in a scale measure the same concept. In other words, it is a determination as to whether or not the items group together from a statistical point of view. The Alpha express as a number between 0 and 1, where the higher the number, the stronger the items group together statistically (Cronbach, 1951). There are different reports regarding the acceptable values of alpha from .70 to .90; above .70 are acceptable, above .80 are good, and above .90 are great (Bland & Altman, 1997; DeVellis, 2003; Nunnally & Bernstein, 1994). However, a maximum alpha value of .90 has been recommended (Streiner, 2003).

In this study, Cronbach's Alpha was applied for the questions in section 2 and section 3 where the reliability statistics were presented in five groups based on the structure of questionnaire. From the pilot-test, the results showed that the alpha of exhibition production was .969, the alpha of communication and public relations was .938, the alpha of souvenirs distribution was .977, the alpha of venue was .948, and the alpha of staff was .968.

Additionally, this study also measured the reliability of questionnaire after the actual survey was conducted where a total of 394 questionnaires were used as samples. The results showed that the alpha of exhibition production was .972, the alpha of communication and public relations was .952, the alpha of souvenirs distribution was .972, the alpha of venue was .925, and the alpha of staff was .965.

It can be seen that all Cronbach's alpha values are above .90, which indicates a very high-level of reliability for this scale. That means the items in each group of questionnaire measures the same concept and had a very high internal consistency of items within a group, so the items in each group go together very well.

## CHAPTER IV

### RESULTS OF STUDY

The study of green practice level and factors affecting green practice level of exhibition venues shows these following results.

#### 4.1 Exhibitors' Demographics

##### 4.1.1 Frequency Distribution

**Table 4.1:** Statistics of exhibitors' demographics

		<i>Frequency</i>	<i>Percentage</i>
<b>Venue</b>	QSNCC	203	51.50
	IMPACT	191	48.50
<b>Time exhibited</b>	Once	77	19.50
	2-5 times	126	32.00
	6-10 times	48	12.20
	More than 10 times	143	36.30
<b>Type of business</b>	Food and Beverage	41	10.40
	Textile and Jewelry	77	19.50
	Home and Furniture	24	6.10
	Book and Printing media	91	23.10
	Electrical and Electronic appliance	64	16.20
	Health and Beauty	40	10.20
	Others	57	14.50
<b>Size of company</b>	Small (< 50 employees)	233	59.10
	Medium (50-200 employees)	85	21.60

**Table 4.1:** Statistics of exhibitors' demographics (cont.)

		<i>Frequency</i>	<i>Percentage</i>
<b>Size of company</b>	Large (> 200 employees)	76	19.30
<b>Age of organization</b>	1-2 years	37	9.40
	3-5 years	46	11.70
	6-10 years	86	21.80
	More than 10 years	225	57.10
<b>Type of organization</b>	Government/State enterprise	54	13.70
	Association/Club/Foundation	46	11.70
	Private enterprise with local funding	219	55.60
	Private enterprise with partial or full foreign funding	25	6.30
	Local chain enterprise	34	8.60
	International chain enterprise	16	4.10
<b>The company has green policy</b>	Yes	318	80.70
	No	76	19.30
<b>Familiarity with green exhibition guideline</b>	Yes	113	28.70
	No	281	71.30

As show in Table 4.1, this study sampled 394 exhibitors which more than half of the respondents (51.50%) were exhibitors at QSNCC and the rest (48.50%) were exhibitors at IMPACT. Moreover, 36.30% of respondents had exhibited more than 10 times, 32.00% had exhibited 2-5 times, 19.50% had the first time exhibited, and 12.20% had exhibited 6-10 times. The respondents were categorized into several types of business, including book and printing media (23.10%), textile and jewelry (19.50%), electrical and electronic appliance (16.20%), other businesses (14.50%), food and beverage (10.40%), health and beauty (10.20%), and home and furniture businesses (6.10%). More than half of respondents (59.10%) came from small-sized companies with less than 50 employees, followed by medium-sized companies (21.60%) with 50-200 employees, and large-sized companies (19.30%) with more than 200 employees.

In this study, 57.10% of respondents was from organizations with more than 10 years old, 21.80% from 6-10 years old, 11.70% from 3-5 years old, and the rest (9.40%) from 1-2 years old. The respondents were categorized in several types of

organization, including private enterprises with local funding (55.60%), government/state enterprises (13.70%), association/club/foundation (11.70%), local chain enterprises (8.60%), private enterprises with partial or full foreign funding (6.30%), and international chain enterprises (4.10%). The majority of respondents (80.70%) were from the company with green policy and 19.30% was from the company without green policy. Besides, most of respondents (71.30%) were not familiar with any green exhibition guideline and the rest (28.70%) were familiar with green exhibition guideline.

#### 4.1.2 Chi-Square Test

**Table 4.2:** Chi-Square test on exhibition venues and number of times exhibited

<i>Exhibition Venue</i>	<i>Time Exhibited</i>				<i>Total</i>
	<i>Once</i>	<i>2-5 times</i>	<i>6-10 times</i>	<i>&gt; 10 times</i>	
QSNCC	19 (9.40%)	71 (35.00%)	28 (13.80%)	85 (41.80%)	203 (100%)
IMPACT	58 (30.40%)	55 (28.70%)	20 (10.50%)	58 (30.40%)	191 (100%)
<b>Total</b>	77 (19.50%)	126 (32.00%)	48 (12.20%)	143 (36.30%)	394 (100%)

Pearson Chi-Square = 27.877 (3),  $p = .000$

Table 4.2 describes the Chi-Square results on exhibition venues and number of times exhibited. The Chi-Square value from the association between exhibition venues and number of times exhibited was obtained as 27.877 with 3 degrees of freedom and significance probability was 0.000. On the evidence of this data showed that there is an association between exhibition venues and number of times exhibited among the respondents.

The majority of respondents from QSNCC had exhibited more than 10 times (41.80%), followed by 2-5 times (35.00%), 6-10 times (13.80%), and first time exhibited (9.40%). Whereas most of respondents from IMPACT had the first time (30.40%) and more than 10 times exhibited (30.40%) in same percentage, followed by 2-5 times (28.70%) and 6-10 times (10.50%).

**Table 4.3:** Chi-Square test on exhibition venues and type of business

<i>Exhibition Venue</i>	<i>Type of Business</i>							<i>Total</i>
	<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>	<i>(7)</i>	
QSNCC	3 (1.50%)	24 (11.80%)	0 (0%)	90 (44.30%)	31 (15.30%)	40 (19.70%)	15 (7.40%)	203 (100%)
IMPACT	38 (19.90%)	53 (27.70%)	24 (12.60%)	1 (0.50%)	33 (17.30%)	0 (0%)	42 (22.00%)	191 (100%)
<b>Total</b>	41 (10.40%)	77 (19.50%)	24 (6.10%)	91 (23.10%)	64 (16.20%)	40 (10.20%)	57 (14.50%)	394 (100%)

Pearson Chi-Square = 2.045 (6), p = .000

**Remark:** (1) = Food and beverage, (2) = Textile and jewelry, (3) = Home and furniture, (4) = Book and printing media, (5) = Electrical and electronic appliance, (6) = Health and beauty, (7) = Other businesses

The Chi-Square value (Table 4.3) from the association between exhibition venues and type of business was obtained as 2.045 with 6 degrees of freedom and significance probability was 0.000. On the evidence of this data showed that there is an association between exhibition venues and type of business among the respondents.

The study found that major respondents from QSNCC were from a group of book and printing media businesses (44.30%), followed by health and beauty businesses (19.70%), electrical and electronic appliance businesses (15.30%), textile and jewelry businesses (11.80%), other businesses (7.40%), and food and beverage businesses (1.50%). Whereas the respondents from IMPACT fell to a group of textile and jewelry businesses (27.70%), other businesses (22.00%), food and beverage businesses (19.90%), electrical and electronic appliance businesses (17.30%), home and furniture businesses (12.60%), and book and printing media businesses (0.50%).

**Table 4.4:** Chi-Square test on exhibition venues and age of organizations

<i>Exhibition Venue</i>	<i>Age of Organization</i>				<i>Total</i>
	<i>1-2 years</i>	<i>3-5 years</i>	<i>6-10 years</i>	<i>&gt; 10 years</i>	
QSNCC	7 (3.40%)	19 (9.40%)	43 (21.20%)	134 (66.00%)	203 (100%)
IMPACT	30 (15.70%)	27 (14.20%)	43 (22.50%)	91 (47.60%)	191 (100%)
<b>Total</b>	37 (9.40%)	46 (11.70%)	86 (21.80%)	225 (57.10%)	394 (100%)

Pearson Chi-Square = 23.563 (3), p = .000

According to Table 4.4, the Chi-Square results revealed the association between exhibition venues and age of organization among the respondents. The Chi-Square value was obtained as 23.563 with 3 degrees of freedom and significance probability was 0.000.

By the results, more than half of respondents from QSNCC came from organizations with more than 10 years old (66.00%) through 6-10 years old (21.20%), 3-5 years old (9.40%), and 1-2 years of old (3.40%). Meanwhile, most of respondents from IMPACT came from organizations with more than 10 years old (47.60%), followed by 6-10 years old (22.50%), 1-2 years old (15.70%), and 3-5 years old (14.20%).

**Table 4.5:** Chi-Square test on exhibition venues and type of organization

<i>Exhibition Venue</i>	<i>Type of Organization</i>						<i>Total</i>
	<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>	
QSNCC	7 (3.40%)	1 (0.50%)	150 (73.90%)	12 (5.90%)	21 (10.40%)	12 (5.90%)	203 (100%)
IMPACT	47 (24.60%)	45 (23.60%)	69 (36.10%)	13 (6.80%)	13 (6.80%)	4 (2.10%)	191 (100%)
<b>Total</b>	54 (13.70%)	46 (11.70%)	219 (55.60%)	25 (6.30%)	34 (8.60%)	16 (4.10%)	394 (100%)

Pearson Chi-Square = 1.073 (5), p = .000

**Remark:** (1) = Government/State enterprise, (2) = Association/Club/Foundation, (3) = Private enterprise with local funding, (4) = Private enterprise with partial or full foreign funding, (5) = Local chain enterprise, (6) = International chain enterprise

Table 4.5 explains the Chi-Square results on exhibition venues and type of organization. The Chi-Square value from the association between exhibition venues and type of organization was obtained as 1.073 with 5 degrees of freedom and significance probability was 0.000. On the evidence of this data showed that there is an association between exhibition venues and type of organization among the respondents.

The large majority of respondents from QSNCC were from private enterprises with local funding (73.90%), followed by local chain enterprises (10.40%), international chain enterprises (5.90%) and private enterprises with partial or full

foreign funding (5.90%), government/state enterprises (3.40%), and association/club/foundation (0.50%). Whereas, the respondents from IMPACT were from private enterprises with local funding (36.10%), government/state enterprises (24.60%), association/club/foundation (23.60%), private enterprises with partial or full foreign funding (6.80%), local chain enterprises (6.80%), and international chain enterprises (2.10%).

**Table 4.6:** Chi-Square test on number of times exhibited and type of business

<i>Time Exhibited</i>	<i>Type of Business</i>							<i>Total</i>
	<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>	<i>(7)</i>	
Once	14 (18.20%)	16 (20.70%)	8 (10.40%)	0 (0%)	18 (23.40%)	7 (9.10%)	14 (18.20%)	77 (100%)
2-5 times	16 (12.70%)	21 (16.70%)	5 (4.00%)	25 (19.80%)	24 (19.00%)	19 (15.10%)	16 (12.70%)	126 (100%)
6-10 times	3 (6.20%)	7 (14.60%)	6 (3.50%)	16 (33.30%)	7 (14.60%)	2 (4.20%)	7 (14.60%)	48 (100%)
> 10 times	8 (5.60%)	33 (23.00%)	5 (3.50%)	50 (35.20%)	15 (10.50%)	12 (8.20%)	20 (14.00%)	143 (100%)
<b>Total</b>	41 (10.40%)	77 (19.50%)	24 (6.10%)	91 (23.10%)	64 (16.20%)	40 (10.20%)	57 (14.50%)	394 (100%)

Pearson Chi-Square = 60.824 (18), p = .000

**Remark:** (1) = Food and beverage, (2) = Textile and jewelry, (3) = Home and furniture, (4) = Book and printing media, (5) = Electrical and electronic appliance, (6) = Health and beauty, (7) = Other businesses

According to Table 4.6, the study found the association between number of times exhibited and type of business among the respondents. The Chi-Square value from the association between number of times exhibited and type of business was obtained as 60.824 with 18 degrees of freedom and significance probability was 0.000.

The study found that the respondents who had the first time exhibited fell to a group of electrical and electronic appliance businesses (23.40%), textile and jewelry businesses (20.70%), food and beverage businesses (18.20%), other businesses (18.20%), home and furniture businesses (10.40%), and health and beauty businesses (9.10%). Meanwhile the respondents who had 2-5 times exhibited fell to a group of book and printing media businesses (19.80%), electrical and electronic appliance businesses (19.00%), textile and jewelry businesses (16.70%), health and beauty

businesses (15.10%), food and beverage businesses (12.70%), other businesses (12.70%), and home and furniture businesses (4.00%).

Furthermore, most of respondents who had 3-5 times exhibited were a group of book and printing media businesses (33.30%), followed by textile and jewelry businesses (14.60%), electrical and electronic appliance businesses (14.60%), and other businesses (14.60%) in same percentage. The rest of respondents who had 3-5 times exhibited were a group of food and beverage businesses (6.20%), health and beauty businesses (4.20%), and home and furniture businesses (3.50%). In addition, most of respondents who had more than 10 times exhibited were a group of book and printing media businesses (35.20%), textile and jewelry businesses (23.00%), other businesses (14.00%), electrical and electronic appliance businesses (10.50%), health and beauty businesses (8.20%), food and beverage businesses (5.60%), and home and furniture businesses (3.50%).

**Table 4.7:** Chi-Square test on number of times exhibited and age of organization

<i>Time Exhibited</i>	<i>Age of Organization</i>				<i>Total</i>
	<i>1-2 years</i>	<i>3-5 years</i>	<i>6-10 years</i>	<i>&gt; 10 years</i>	
Once	19 (24.60%)	14 (18.20%)	12 (15.60%)	32 (41.60%)	77 (100%)
2-5 times	11 (8.70%)	20 (15.90%)	32 (25.40%)	63 (50.00%)	126 (100%)
6-10 times	3 (6.20%)	6 (12.50%)	13 (27.10%)	26 (54.20%)	48 (100%)
> 10 times	4 (2.80%)	6 (4.20%)	29 (20.30%)	104 (72.70%)	143 (100%)
<b>Total</b>	37 (9.40%)	46 (11.70%)	86 (21.80%)	225 (57.10%)	394 (100%)

Pearson Chi-Square = 51.344 (9),  $p = .000$

The Chi-Square value (Table 4.7) from the association between number of times exhibited and age of organization was obtained as 51.344 with 9 degrees of freedom and significance probability was 0.000. On the evidence of this data showed that there is an association between number of times exhibited and age of organization among the respondents.

Most of respondents who were the first time exhibitors came from organizations with more than 10 years old, followed by 1-2 years old (24.60%), 3-5 years of old (18.20%), and 6-10 years of old (15.60%). About respondents who had 2-5 times exhibited, half of them came from organizations with more than 10 years old

(50.00%), followed by 6-10 years old (25.40%), 3-5 years old (15.90%), and 1-2 years old (8.70%). The study also showed that more than half of respondents who had 6-10 times exhibited came from organizations with more than 10 years old (54.20%), followed by 6-10 years old (27.10%), 3-5 years old (12.50%), and 1-2 years old (6.20%). Moreover, the majority of respondents who had more than 10 times exhibited came from organizations with more than 10 years old (72.70%), followed by 6-10 years old (20.30%), 3-5 years old (4.20%), and 1-2 years old (2.80%).

**Table 4.8:** Chi-Square test on number of times exhibited and type of organization

<i>Time Exhibited</i>	<i>Type of Organization</i>						<i>Total</i>
	<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>	
Once	17 (22.10%)	15 (19.50%)	28 (36.40%)	8 (10.40%)	3 (3.80%)	6 (7.80%)	77 (100%)
2-5 times	18 (14.30%)	7 (5.60%)	75 (59.50%)	9 (7.10%)	12 (9.50%)	5 (4.00%)	126 (100%)
6-10 times	2 (4.20%)	5 (10.40%)	27 (56.20%)	4 (8.30%)	8 (16.70%)	2 (4.20%)	48 (100%)
> 10 times	17 (11.90%)	19 (13.30%)	89 (62.20%)	4 (2.80%)	11 (7.70%)	3 (2.10%)	143 (100%)
<b>Total</b>	54 (13.7%)	46 (11.7%)	219 (55.6%)	25 (6.3%)	34 (8.6%)	16 (4.1%)	394 (100%)

Pearson Chi-Square = 37.658 (15),  $p = .001$

**Remark:** (1) = Government/State enterprise, (2) = Association/Club/Foundation, (3) = Private enterprise with local funding, (4) = Private enterprise with partial or full foreign funding, (5) = Local chain enterprise, (6) = International chain enterprise

Table 4.8 describes the Chi-Square results on number of times exhibited and type of organization. The Chi-Square value was obtained as 37.658 with 15 degrees of freedom and significance probability was 0.001. On the evidence of this data showed that there is an association between number of times exhibited and type of organization among the respondents.

The results showed that most of respondents who had the first time exhibited came from private enterprises with local funding (36.40%), then government/state enterprises (22.10%), association/club/foundation (19.50%), private

enterprises with partial or full foreign funding (10.40%), international chain enterprises (7.80%), and local chain enterprises (3.80%). Meanwhile, more than half of respondents who had 2-5 times exhibited came from private enterprises with local funding (59.50%), followed by government/state enterprises (14.30%), local chain enterprises (9.50%), private enterprises with partial or full foreign funding (7.10%), association/club/foundation (5.60%), and international chain enterprises (4.00%).

Furthermore, the respondents who had 6-10 times exhibited came from private enterprises with local funding (56.20%), local chain enterprises (16.70%), association/club/foundation (10.40%), private enterprises with partial or full foreign (8.30%), government/state enterprises (4.20%), and international chain enterprises (4.20%). Additionally, the respondents who had more than 10 times exhibited came from private enterprises with local funding (62.20%), association/club/foundation (13.30%), government/state enterprises (11.90%), local chain enterprises (7.70%), private enterprises with partial or full foreign funding (2.80%), and international chain enterprises (2.10%).

**Table 4.9:** Chi-Square test on type of business and size of company

<i>Type of Business</i>	<i>Size of Company</i>			<i>Total</i>
	<i>Small</i>	<i>Medium</i>	<i>Large</i>	
Food and Beverage	33 (80.50%)	4 (9.80%)	4 (9.70%)	41 (100%)
Textile and Jewelry	52 (67.50%)	12 (15.60%)	13 (16.90%)	77 (100%)
Home and Furniture	18 (75.00%)	4 (16.70%)	2 (8.30%)	24 (100%)
Book and Printing media	58 (63.70%)	22 (24.20%)	11 (12.10%)	91 (100%)
Electrical and Electronic	27 (42.20%)	23 (35.90%)	14 (21.90%)	64 (100%)
Health and Beauty	19 (47.50%)	6 (15.00%)	15 (37.50%)	40 (100%)
Others	26 (45.60%)	14 (24.60%)	17 (29.80%)	57 (100%)
<b>Total</b>	233 (59.10%)	85 (21.60%)	76 (19.30%)	394 (100%)

Pearson Chi-Square = 39.340 (12), p = .000

The Chi-Square value (Table 4.9) from the association between type of business and size of company was obtained as 39.340 with 12 degrees of freedom and

significance probability was 0.000. On the evidence of this data showed that there is an association between type of business and size of company among the respondents.

The study revealed that major respondents from food and beverage businesses came from small-sized companies (80.50%), and the rest of respondents came from medium-sized companies (9.80%) and large-sized companies (9.70%). Whereas 67.50% of the respondents from a group of textile and jewelry businesses came from small-sized companies, 16.90% from large-sized companies, and 15.60% from medium-sized companies. About home and furniture businesses, most of respondents came from small-sized companies (75.00%), followed by medium-sized companies (16.70%), and large-sized companies (8.30%).

Moreover, more than half of respondents from book and printing media businesses came from small-sized companies (63.70%), then medium-sized companies (24.20%), and large-sized companies (12.10%). In electrical and electronic appliance businesses, 42.20% came from small-sized companies, 35.90% from medium-sized companies, and the rest 21.90% from large-sized companies. Meanwhile, the major respondents from health and beauty businesses came from small-sized companies (47.50%), followed by large-sized companies (37.50%), and medium-sized companies (15.00%). Finally, 45.60% of respondents from other businesses came from small-sized companies, 29.80% from large-sized companies, and 24.60% of respondents came from medium-sized companies.

**Table 4.10:** Chi-Square test on type of business and age of organization

<i>Type of Business</i>	<i>Age of Organization</i>				<i>Total</i>
	<i>1-2 years</i>	<i>3-5 years</i>	<i>6-10 years</i>	<i>&gt; 10 years</i>	
Food and Beverage	11 (26.80%)	7 (17.10%)	9 (22.00%)	14 (34.10%)	41 (100%)
Textile and Jewelry	5 (6.50%)	10 (13.00%)	14 (18.20%)	48 (62.30%)	77 (100%)
Home and Furniture	5 (20.80%)	3 (12.50%)	5 (20.80%)	11 (45.90%)	24 (100%)
Book and Printing media	0 (0%)	4 (4.40%)	24 (26.40%)	63 (69.20%)	91 (100%)
Electrical and Electronic	8 (12.50%)	7 (10.90%)	17 (26.60%)	32 (50.00%)	64 (100%)

Pearson Chi-Square = 48.930 (18), p = .000

**Table 4.10:** Chi-Square test on type of business and age of organization (cont.)

<i>Type of Business</i>	<i>Age of Organization</i>				<i>Total</i>
	<i>1-2 years</i>	<i>3-5 years</i>	<i>6-10 years</i>	<i>&gt; 10 years</i>	
Health and Beauty	5 (12.50%)	9 (22.50%)	6 (15.00%)	20 (50.00%)	40 (100%)
Others	3 (5.30%)	6 (10.50%)	11 (19.30%)	37 (64.90%)	57 (100%)
<b>Total</b>	37 (9.40%)	46 (11.70%)	86 (21.80%)	225 (57.10%)	394 (100%)

Pearson Chi-Square = 48.930 (18),  $p = .000$

According to Table 4.10, the Chi-Square results revealed the association between type of business and age of organization among the respondents. The Chi-Square value from the association between types of business and ages of organization was obtained as 48.930 with 18 degrees of freedom and significance probability was 0.000.

By the results, 34.10% of the respondents in a group of food and beverage businesses came from the organizations with more than 10 years old, 26.80% from 1-2 years old, 22.00% from 6-10 years old, and 17.10% of respondents came from the organization with 3-5 years old. Whereas major respondents from a group of textile and jewelry businesses came from the organizations with more than 10 years old (62.30%), followed by 6-10 years old (18.20%), 3-5 years old (13.00%), and 1-2 years old (6.50%). In a group of home and furniture businesses, 45.90% of respondents fell to the organizations with more than 10 years old, further 20.80% fell to both 1-2 years old and 6-10 years old, and 12.50% of respondents fell to the organizations with 3-5 years old.

The study also found that most of respondents from a group of book and printing media businesses came from the organizations with more than 10 years old (69.20%), then 6-10 years old (26.40%), and 3-5 years old (4.40%). Furthermore, half of respondents from a group of electrical and electronic appliance businesses came from the organizations with more than 10 years old (50.00%), followed by 6-10 years old (26.60%), 1-2 years old (12.50%), and 3-5 years old (10.90%). Meanwhile, half of respondents from a group of health and beauty businesses came from the organizations with more than 10 years old (50.00%), then 3-5 years old (22.50%), 6-10 years old (15.00%), and 1-2 years old (12.50%). In addition, 64.90% of respondents from a group

of other businesses came from the organizations with more than 10 years old, 19.3% from 6-10 years old, 10.50% from 3-5 years old, and the rest of 5.30% came from the organizations with 1-2 years old.

**Table 4.11:** Chi-Square test on type of business and type of organization

<i>Type of Business</i>	<i>Type of Organization</i>						<i>Total</i>
	<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>	
Food and Beverage	10 (24.40%)	14 (26.80%)	19 (46.40%)	1 (2.40%)	0 (0%)	0 (0%)	41 (100%)
Textile and Jewelry	11 (14.30%)	19 (24.70%)	34 (44.20%)	6 (7.70%)	5 (6.50%)	2 (2.60%)	77 (100%)
Home and Furniture	5 (20.80%)	6 (25.00%)	9 (37.50%)	1 (4.20%)	3 (12.50%)	0 (0%)	24 (100%)
Book and Printing	2 (2.20%)	0 (0%)	73 (80.20%)	1 (1.10%)	12 (13.20%)	3 (3.30%)	91 (100%)
Electrical and Electronic	9 (14.10%)	3 (4.70%)	35 (54.70%)	10 (15.60%)	3 (4.70%)	4 (6.20%)	64 (100%)
Health and Beauty	1 (2.50%)	0 (0%)	27 (67.50%)	3 (7.50%)	5 (12.50%)	4 (10.00%)	40 (100%)
Others	16 (28.10%)	7 (12.20%)	22 (38.60%)	3 (5.30%)	6 (10.50%)	3 (5.30%)	57 (100%)
<b>Total</b>	54 (13.70%)	46 (11.70%)	219 (55.60%)	25 (6.30%)	34 (8.60%)	16 (4.10%)	394 (100%)

Pearson Chi-Square = 1.145 (30), p = .000

**Remark:** (1) = Government/State enterprise, (2) = Association/Club/Foundation, (3) = Private enterprise with local funding, (4) = Private enterprise with partial or full foreign funding, (5) = Local chain enterprise, (6) = International chain enterprise

Table 4.11 explains the Chi-Square results on type of business and type of organization. The Chi-Square value from the association between type of business and type of organization was obtained as 1.145 with 30 degrees of freedom and significance probability was 0.000. On the evidence of this data showed that there is an association between type of business and type of organization among the respondents.

The most of respondents from a group of food and beverage businesses came from private enterprises with local funding (46.40%), followed by

association/club/foundation (26.80%), and government/state enterprises (24.40%). Whereas, most of respondents from a group of textile and jewelry businesses came from private enterprises with local funding (44.20%), then association/club/foundation (24.70%), government/state enterprises (14.30%), private enterprises with partial or full foreign funding (7.70%), local chain enterprises (6.50%), and international chain enterprises (2.60%). The major respondents from a group of home and furniture businesses came from private enterprises with local funding (37.50%), followed by association/club/foundation (25.00%), government/state enterprises (20.80%), local chain enterprises (12.50%), and private enterprises with partial or full foreign funding (4.20%). Meanwhile, major respondents from a group of book and printing media businesses came from private enterprises with local funding (80.20%), then local chain enterprises (13.20%), international chain enterprises (3.30%), government/state enterprises (2.20%), and private enterprises with partial or full foreign funding (1.10%).

About electrical and electronic appliance businesses, 54.70% of respondents came from private enterprises with local funding, 15.60% from private enterprises with partial or full foreign funding, 14.10% from government/state enterprises, 6.20% from international chain enterprises, and the rest 4.70% of respondent came from association/club/foundation and 4.70% from local chain enterprises. Whereas, 67.50% of respondents from a group of health and beauty businesses came from private enterprises with local funding, 12.50% from local chain enterprises, 10.00% from international chain enterprises, 7.50% from private enterprises with partial or full foreign funding, and 2.50% from government/state enterprises. Eventually, in group of other businesses, 38.60% of respondents came from private enterprises with local funding, 28.10% from government/state enterprises, 12.20% from association/club/foundation, 10.50% from local chain enterprises, and the rest of 5.30% came from private enterprises with partial or full foreign funding and 5.30% from international chain enterprises.

**Table 4.12:** Chi-Square test on type of business and green policy of company

<i>Type of Business</i>	<i>Does the company have green policy?</i>		
	<i>Yes</i>	<i>No</i>	<i>Total</i>
Food and Beverage	27 (65.90%)	14 (34.10%)	41 (100%)
Textile and Jewelry	71 (92.20%)	6 (7.80%)	77 (100%)
Home and Furniture	22 (91.70%)	2 (8.30%)	24 (100%)
Book and Printing media	65 (71.40%)	26 (28.60%)	91 (100%)
Electrical and Electronic	51 (79.70%)	13 (20.30%)	64 (100%)
Health and Beauty	31 (77.50%)	9 (22.50%)	40 (100%)
Others	51 (89.50%)	6 (10.50%)	57 (100%)
<b>Total</b>	318 (80.70%)	76 (19.30%)	394 (100%)

Pearson Chi-Square = 22.356 (6), p = .001

According to Table 4.12, the study found the association between type of business and green policy of company among the respondents. The Chi-Square value from the association between type of business and green policy of company was obtained as 22.356 with 6 degrees of freedom and significance probability was 0.001.

The study revealed that the majority of respondents from a group of food and beverage businesses (65.90%), textile and jewelry businesses (92.20%), home and furniture businesses (91.70%), book and printing media businesses (71.40%), electrical and electronic appliance businesses (79.70%), health and beauty businesses (77.50%), and other businesses (89.50%) came from the companies with green policy.

**Table 4.13:** Chi-Square test on type of business and the familiarity with green exhibition guideline

<i>Type of Business</i>	<i>Are you familiar with green exhibition guideline?</i>		
	<i>Yes</i>	<i>No</i>	<i>Total</i>
Food and Beverage	15 (36.60%)	26 (63.40%)	41 (100%)
Textile and Jewelry	15 (19.50%)	62 (80.50%)	77 (100%)
Home and Furniture	8 (33.30%)	16 (66.70%)	24 (100%)
Book and Printing media	19 (20.90%)	72 (79.10%)	91 (100%)

Pearson Chi-Square = 18.699 (6), p = .005

**Table 4.13:** Chi-Square test on type of business and the familiarity with green exhibition guideline (cont.)

<i>Type of Business</i>	<i>Are you familiar with green exhibition guideline?</i>		
	<i>Yes</i>	<i>No</i>	<i>Total</i>
Electrical and Electronic	24 (37.50%)	40 (62.50%)	64 (100%)
Health and Beauty	7 (17.50%)	33 (82.50%)	40 (100%)
Others	25 (43.90%)	32 (56.10%)	57 (100%)
<b>Total</b>	113 (28.70%)	281 (71.30%)	394 (100%)

Pearson Chi-Square = 18.699 (6), p = .005

The Chi-Square value (Table 4.13) from the association between type of business and the familiarity with green exhibition guideline was obtained as 18.699 with 6 degrees of freedom and significance probability was 0.005. On the evidence of this data showed that there is an association between type of business and the familiarity with green exhibition guideline among the respondents.

The results indicated that most of respondents from a group of food and beverage businesses (63.40%), textile and jewelry businesses (80.50%), home and furniture businesses (66.70%), book and printing media businesses (79.10%), electrical and electronic appliance businesses (62.50%), health and beauty businesses (82.50%), and other businesses (56.10%) unfamiliar with any green exhibition guideline.

**Table 4.14:** Chi-Square test on size of company and age of organization

<i>Size of Company</i>	<i>Age of Organization</i>				<i>Total</i>
	<i>1-2 years</i>	<i>3-5 years</i>	<i>6-10 years</i>	<i>&gt; 10 years</i>	
Small	29 (12.40%)	34 (14.60%)	64 (27.50%)	106 (45.50%)	233 (100%)
Medium	8 (9.40%)	11 (12.90%)	18 (21.20%)	48 (56.50%)	85 (100%)
Large	0 (0%)	1 (1.30%)	4 (5.30%)	71 (93.40%)	76 (100%)
<b>Total</b>	37 (9.40%)	46 (11.70%)	86 (21.80%)	225 (57.10%)	394 (100%)

Pearson Chi-Square = 54.279 (6), p = .000

According to Table 4.14, the Chi-Square results revealed the association between size of company and age of organization among the respondents. The Chi-Square value from

the association between size of company and age of organization was obtained as 54.279 with 6 degrees of freedom and significance probability was 0.000.

The study found that 45.50% of the respondents from small-sized companies came from the organizations with more than 10 years old, 27.50% from 6-10 years old, 14.60% from 3-5 years old, and 12.40% from 1-2 years old. Whereas, 56.50% of respondents from medium-sized companies came from the organizations with more than 10 years old, 21.20% from 6-10 years old, 12.90% from 3-5 years old, and 9.40% of respondents came from the organizations with 1-2 years old. Furthermore, the major respondents from large-sized companies came from the organizations with more than 10 years old (93.40%), followed by 6-10 years old (5.30%), and 3-5 years old (1.30%).

**Table 4.15:** Chi-Square test on size of company and type of organization

<i>Size of Company</i>	<i>Type of Organization</i>						<i>Total</i>
	<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>	
Small	30 (12.90%)	35 (15.00%)	133 (57.10%)	7 (3.00%)	19 (8.20%)	9 (3.80%)	233 (100%)
Medium	12 (14.20%)	7 (8.20%)	42 (49.40%)	11 (12.90%)	9 (10.60%)	4 (4.70%)	85 (100%)
Large	12 (15.80%)	4 (5.30%)	44 (57.90%)	7 (9.20%)	6 (7.90%)	3 (3.90%)	76 (100%)
<b>Total</b>	54 (13.70%)	46 (11.70%)	219 (55.60%)	25 (6.30%)	34 (8.60%)	16 (4.10%)	394 (100%)

Pearson Chi-Square = 18.399 (10), p = .049

**Remark:** (1) = Government/State enterprise, (2) = Association/Club/Foundation, (3) = Private enterprise with local funding, (4) = Private enterprise with partial or full foreign funding, (5) = Local chain enterprise, (6) = International chain enterprise

Table 4.15 explains the Chi-Square results on size of company and type of organization. The Chi-Square value from the association between size of company and type of organization was obtained as 18.399 with 10 degrees of freedom and significance probability was 0.049. On the evidence of this data showed that there is an association between size of company and type of organization among the respondents.

The results indicated that 57.10% of respondents from small-sized companies were private enterprises with local funding, 15.00% was

association/club/foundation, 12.90% was government/state enterprises, 8.20% was local chain enterprises, 3.80% was international chain enterprises, and 3.00% was private enterprises with partial or full foreign funding. Meanwhile, the study indicated that most of respondents from medium-sized companies were private enterprises with local funding (49.40%), government/state enterprises (14.20%), private enterprises with partial or full foreign funding (12.90%), local chain enterprises (10.60%), association/club/foundation (8.20%), and international chain enterprises (4.70%). Eventually, 57.90% of respondents from large-sized companies were private enterprises with local funding, 15.80% was government/state enterprises, 9.20% was private enterprises with partial or full foreign funding, 7.90% was local chain enterprises, 5.30% was association/club/foundation, and 3.90% were international chain enterprises.

**Table 4.16:** Chi-Square test on size of company and green policy of company

<i>Size of Company</i>	<i>Does the company have green policy?</i>		
	<i>Yes</i>	<i>No</i>	<i>Total</i>
Small	173 (74.20%)	60 (25.80%)	233 (100%)
Medium	73 (85.90%)	12 (14.10%)	85 (100%)
Large	72 (94.70%)	4 (5.30%)	76 (100%)
<b>Total</b>	318 (80.70%)	76 (19.30%)	394 (100%)

Pearson Chi-Square = 17.313 (2),  $p = .000$

According to Table 4.16, the study explored the association between size of company and green policy of company among the respondents. The Chi-Square value from the association between sizes of company and green policy of company was obtained as 17.313 with 2 degrees of freedom and significance probability was 0.000.

The study found that the major respondents from small-sized companies (74.20%), medium-sized companies (85.90%), and large-sized companies (94.70%) came from the companies with green policy.

**Table 4.17:** Chi-Square test on size of company and the familiarity with green exhibition guideline

<i>Size of Company</i>	<i>Are you familiar with green exhibition guideline?</i>		
	<i>Yes</i>	<i>No</i>	<i>Total</i>
Small	56 (24.00%)	177 (76.00%)	233 (100%)
Medium	31 (36.50%)	54 (63.50%)	85 (100%)
Large	26 (34.20%)	50 (65.80%)	76 (100%)
<b>Total</b>	113 (28.70%)	281 (71.30%)	394 (100%)

Pearson Chi-Square = 6.117 (2), p = .047

The Chi-Square value (Table 4.17) from the association between size of company and the familiarity with green exhibition guideline was obtained as 6.117 with 2 degrees of freedom and significance probability was 0.047. On the evidence of this data showed that there is an association between size of company and the familiarity with green exhibition guideline among the respondents.

The results indicated that more than half of respondents from small-sized companies (76.00%), medium-sized companies (63.50%), and large-sized companies (65.80%) unfamiliar with any green exhibition guideline.

**Table 4.18:** Chi-Square test on age of organization and green policy of company

<i>Age of Organization</i>	<i>Does the company have green policy?</i>		
	<i>Yes</i>	<i>No</i>	<i>Total</i>
1-2 years	25 (67.60%)	12 (32.40%)	37 (100%)
3-5 years	34 (73.90%)	12 (26.10%)	46 (100%)
6-10 years	62 (72.10%)	24 (27.90%)	86 (100%)
> 10 years	197 (87.50%)	28 (12.50%)	225 (100%)
<b>Total</b>	318 (80.70%)	76 (19.30%)	394 (100%)

Pearson Chi-Square = 16.344 (3), p = .001

Table 4.18 explains the Chi-Square results on age of organization and green policy of company. The results showed that there is an association between age of organization and green policy of company among the respondents. The Chi-Square value was obtained as 16.344 with 3 degrees of freedom and significance probability was 0.001.

The study revealed that most of respondents from organizations with 1-2 years old (67.60%), 3-5 years old (73.90%), 6-10 years old (72.10%), and more than 10 years old (87.50%) came from the companies with green policy.

**Table 4.19:** Chi-Square test on type of organization and green policy of company

<i>Type of Organization</i>	<i>Does the company have green policy?</i>		
	<i>Yes</i>	<i>No</i>	<i>Total</i>
Government/State enterprise	48 (88.90%)	6 (11.10%)	54 (100%)
Association/Club/Foundation	44 (95.70%)	2 (4.30%)	46 (100%)
Private enterprise with local funding	165 (75.30%)	54 (24.70%)	219 (100%)
Private enterprise with partial or full foreign funding	23 (92.00%)	2 (8.00%)	25 (100%)
Local chain enterprise	28 (82.40%)	6 (17.60%)	34 (100%)
International chain enterprise	10 (62.50%)	6 (37.50%)	16 (100%)
<b>Total</b>	318 (80.70%)	76 (19.30%)	394 (100%)

Pearson Chi-Square = 18.484 (5), p = .002

According to Table 4.19, the study explored the association between type of organization and green policy of company among the respondents. The Chi-Square value from the association between type of organization and green policy of company was obtained as 18.484 with 5 degrees of freedom and significance probability was 0.002.

The results showed that the major respondents from government/state enterprises (88.90%), association/club/foundation (95.70%), private enterprises with local funding (75.30%), private enterprises with partial or full foreign funding (92.00%), local chain enterprises (82.40%), and international chain enterprises (62.50%) came from the companies with green policy.

**Table 4.20:** Chi-Square test on type of organization and the familiarity with green exhibition guideline

<i>Type of Organization</i>	<i>Are you familiar with green exhibition guideline?</i>		
	<i>Yes</i>	<i>No</i>	<i>Total</i>
Government/State enterprise	25 (46.30%)	29 (53.70%)	54 (100%)
Association/Club/Foundation	7 (15.20%)	39 (84.80%)	46 (100%)
Private enterprise with local funding	50 (22.80%)	169 (77.20%)	219 (100%)
Private enterprise with partial or full foreign funding	13 (52.00%)	12 (48.00%)	25 (100%)
Local chain enterprise	12 (35.30%)	22 (64.70%)	34 (100%)
International chain enterprise	6 (37.50%)	10 (62.50%)	16 (100%)
<b>Total</b>	113 (28.70%)	281 (71.30%)	394 (100%)

Pearson Chi-Square = 23.914 (5),  $p = .000$

The Chi-Square value (Table 4.20) from the association between type of organization and the familiarity with green exhibition guideline was obtained as 23.914 with 5 degrees of freedom and significance probability was 0.000. On the evidence of this data showed that there is an association between type of organization and the familiarity with green exhibition guideline among the respondents.

The study found that more than half of respondents from private enterprises with partial or full foreign funding (52.00%) familiar with green exhibition guideline. Whereas, most of respondents from government/state enterprises (53.70%), association/club/foundation (84.80%), private enterprises with local funding (77.20%), local chain enterprise (64.70%), and international chain enterprise (62.50%) unfamiliar with any green exhibition guideline.

**Table 4.21:** Chi-Square test on green policy of company and the familiarity with green exhibition guideline

<i>Does the company have green policy?</i>	<i>Are you familiar with green exhibition guideline?</i>		
	<i>Yes</i>	<i>No</i>	<i>Total</i>
Yes	106 (33.30%)	212 (66.70%)	318 (100%)
No	7 (9.20%)	69 (90.80%)	76 (100%)
<b>Total</b>	113 (28.70%)	281 (71.30%)	394 (100%)

Pearson Chi-Square = 17.450 (1),  $p = .000$

Table 4.21 demonstrates the Chi-Square results on green policy of company and the familiar with green exhibition guideline of exhibitor. The results showed that there is an association between green policy of company and the familiar with green exhibition guideline among the respondents. The Chi-Square value was obtained as 17.450 with 1 degree of freedom and significance probability was 0.000.

The results indicated that 66.70% of respondents from a company with green policy and 90.80% of respondents from a company without green policy unfamiliar with any green exhibition guideline.

## 4.2 Green Practice Level of Exhibition Venues

**Table 4.22:** Statistics of green practice level of exhibition venues regarding exhibition production

<i>Exhibition Production</i>	<i>Mean</i>
The venue encourages you to select reused materials from previous exhibitions that offered by the venue, for instance carpeting, system booths, and name badges.	4.86
The venue informs you in advance about its waste reduction policy.	4.82
The venue supports you to reduce volume of foam, plastic, and paper usage for booth decorations and display materials.	4.81
The venue prepares waste bin for recycling garbage categorized by paper, plastic bottles, glass, and cans.	4.80
The venue guides you about how you can reduce waste.	4.74
The venue prepares station for you to return the name badges after finishing the exhibition to reuse them for the upcoming exhibitions.	4.73
The venue reduces usage of foam, plastic, and paper decorations on stage and/or exhibition area.	4.69
The venue supports you to reuse materials from your previous exhibitions for booth decorations and display materials.	4.68
The venue informs you in advance about its efficient resource usage policy.	4.66
The venue guides you about how you can use efficient resource.	4.62

**Table 4.22:** Statistics of green practice level of exhibition venues regarding exhibition production (cont.)

<i>Exhibition Production</i>	<i>Mean</i>
The venue guides you about how you can reduce energy consumption.	4.62
The venue supports you to use recycled materials for booth decorations and display materials.	4.61
The venue encourages you to reduce electricity use in the booth.	4.61
The venue informs you in advance about its energy consumption reduction policy.	4.58
The venue encourages you to separate waste.	4.58
The venue informs you in advance about its chemical usage reduction policy.	4.55
The venue guides you about how you can reduce chemical usage.	4.49

Table 4.22 describes the results of green practice level of exhibition venues regarding exhibition production category. According to the study results, the items of ‘encouraging exhibitors to select reused materials from previous exhibitions offered by the venues’ ( $\bar{X} = 4.86$ ); ‘informing exhibitors in advance about waste reduction policy’ ( $\bar{X} = 4.82$ ); ‘supporting exhibitors to reduce volume of foam, plastic, and paper usage for booth decorations and display materials’ ( $\bar{X} = 4.81$ ); ‘preparing waste bins for recycling garbage’ ( $\bar{X} = 4.80$ ); and ‘guiding exhibitors about how they can reduce waste’ ( $\bar{X} = 4.74$ ) were ranked as the top five green practice levels of exhibition venues regarding exhibition production.

Followed by ‘preparing stations for exhibitors to return the name badges after finishing the exhibition to reuse them for upcoming exhibitions’ ( $\bar{X} = 4.73$ ); ‘reducing usage of foam, plastic, and paper decorations on stages and/or exhibition areas’ ( $\bar{X} = 4.69$ ); ‘supporting exhibitors to reuse materials from their previous exhibitions for booth decorations and display materials’ ( $\bar{X} = 4.68$ ); ‘informing exhibitors in advance about efficient resource usage policy’ ( $\bar{X} = 4.66$ ); ‘guiding

exhibitors about how they can use efficient resource' ( $\bar{X} = 4.62$ ); and 'guiding exhibitors about how they can reduce energy consumption' ( $\bar{X} = 4.62$ ).

Whereas, the items of 'guiding exhibitors about how they can reduce chemical usage' ( $\bar{X} = 4.49$ ); 'informing exhibitors in advance about chemical usage reduction policy' ( $\bar{X} = 4.55$ ); 'encouraging exhibitors to separate waste' ( $\bar{X} = 4.58$ ); 'informing exhibitors in advance about reducing energy consumption policy' ( $\bar{X} = 4.58$ ); 'encouraging exhibitors to reduce electricity use in the booths' ( $\bar{X} = 4.61$ ); and 'supporting exhibitors to use recycled materials for booth decorations and display materials' ( $\bar{X} = 4.61$ ) were ranked as the lowest green practice level of exhibition venues in this category, respectively.

**Table 4.23:** Statistics of green level of exhibition venues regarding communication and public relations

<i>Communication and Public Relations</i>	<i>Mean</i>
The venue provides relevant information for exhibition via exhibition's website and/or e-mail.	4.96
The venue promotes the exhibition through the use of exhibition's website, e-mail, and/or SMS on mobile phone.	4.92
The venue provides a place to collect any unwanted printing materials from visitors upon exit for waste separation before recycling.	4.86
The venue supports you to promote your display booth through the use of company's website, e-mail, and/or SMS on mobile phone.	4.85
The venue supports you to provide relevant information of your display booth via company's website and/or e-mail to avoid using handbills and brochures during the exhibition.	4.78
The venue supports you to use LCD screen and/or electronic sound distribution system of the venue as a medium for public announcements to avoid using handbills and brochures during the exhibition.	4.75
The venue encourages you to print double-sided when you use paper as media.	4.71
The venue encourages you to use recycled paper when you use paper as media.	4.69

**Table 4.23:** Statistics of green level of exhibition venues regarding communication and public relations (cont.)

<i>Communication and Public Relations</i>	<i>Mean</i>
The venue offers electronic registration via exhibition's website.	4.61
The venue encourages you to reduce paper usage such as handbills and brochures as media.	4.42

Table 4.23 shows the results of green practice level of exhibition venues regarding communication and public relations category. The findings indicated that the highest green practice level of exhibition venues in this category was 'providing relevant information for exhibition via exhibition's website and/or e-mails' ( $\bar{X} = 4.96$ ); followed by 'promoting the exhibition through the use of exhibition's website, e-mails, and/or SMSs on mobile phones' ( $\bar{X} = 4.92$ ); 'providing a place to collect any unwanted printed materials from visitors upon exiting' ( $\bar{X} = 4.86$ ); 'supporting exhibitors to promote the display booths through the use of company's website, e-mails, and/or SMSs on mobile phones' ( $\bar{X} = 4.85$ ); 'supporting exhibitors to provide relevant information of the display booth via company's website and/or e-mails' ( $\bar{X} = 4.78$ ); 'supporting exhibitors to use LCD screens and/or electronic sound distribution system of the venue as a medium for public announcements' ( $\bar{X} = 4.75$ ); 'encouraging exhibitors to print double-sided brochures and handbills' ( $\bar{X} = 4.71$ ); 'encouraging exhibitors to use recycled paper' ( $\bar{X} = 4.69$ ); 'offering electronic registration via exhibition's website' ( $\bar{X} = 4.61$ ); and 'encouraging exhibitors to reduce paper usage such as handbills and brochures as media' ( $\bar{X} = 4.42$ ).

**Table 4.24:** Statistics of green practice level of exhibition venues regarding souvenirs distribution

<i>Souvenir Distribution</i>	<i>Mean</i>
The venue advocates you to avoid materials from plants or animals facing extinction.	4.83
The venue encourages you to select souvenirs made from materials that can be easily found within local area.	4.81
The venue promotes you to select souvenirs made from environmental friendly materials.	4.77
The venue supports you to select souvenirs that can be easily manufactured within local area.	4.77
The venue provides a place to collect any unwanted souvenirs from visitors upon exit to donate them to organizations in need.	4.73
The venue promotes you to minimize packaging for souvenirs.	4.63
The venue advocates you to use recycled packaging for souvenirs.	4.63
The venue supports you to select useful objects as souvenirs, if souvenirs are needed.	4.60
The venue encourages you to select souvenirs made from recycled materials.	4.59
The venue promotes you to avoid distributing souvenirs.	4.25

Table 4.24 demonstrates the results of green practice level of exhibition venues on souvenir distribution category. The results showed that the item of ‘advocating exhibitors to avoid materials from plants or animals facing extinction’ was ranked as the highest green practice level ( $\bar{X} = 4.83$ ), followed by ‘encouraging exhibitors to select souvenirs made from materials that can be easily found within local area’ ( $\bar{X} = 4.81$ ); ‘promoting exhibitors to select souvenirs made from environmental friendly materials’ ( $\bar{X} = 4.77$ ); ‘supporting exhibitors to select souvenirs that can be easily manufacturing within local area’ ( $\bar{X} = 4.77$ ); ‘providing a place to collect any unwanted souvenirs from visitors upon exiting’ ( $\bar{X} = 4.73$ ); ‘promoting exhibitors to minimize packaging for souvenirs’ ( $\bar{X} = 4.63$ ); ‘advocating exhibitors to use recycled packaging for souvenirs’ ( $\bar{X} = 4.63$ ); ‘supporting exhibitors to select useful objects as souvenirs, if souvenirs are needed’ ( $\bar{X} = 4.60$ ); ‘encouraging exhibitors to select

souvenirs made from recycled materials' ( $\bar{X} = 4.59$ ). Finally, the item of 'promoting exhibitors to avoid distributing souvenirs' ( $\bar{X} = 4.25$ ) was ranked as the lowest green practice level of exhibition venues in this category.

### 4.3 Factors Affecting Green Practice Level of Exhibition Venues

**Table 4.25:** Statistics of factors affecting green practice level of exhibition venues

<i>Factors Affecting Green Practice Level of Exhibition Venues</i>	<i>Mean</i>
The venue requires for specific skills and qualified person to implement green policy.	5.10
The staff of venue have positive attitude toward environment preservation.	4.92
The staff of venue are enthusiastic to implement green policy.	4.88
The venue keeps consistency to implement green policy.	4.86
The staff of venue have an awareness to implement green policy.	4.85
The staff of venue have clear understanding about green policy before implementation.	4.77
The staff of venue have the knowledge about environment preservation.	4.76
The venue spends long time for training for specific skills and qualified person.	4.75
The venue owns high maintenance cost to implement green policy.	4.73
The venue holds high training cost for specific skills and qualified person.	4.71
The venue uses large amount of time to implement green policy.	4.63
The venue has high investment cost to implement green policy.	4.57

According to Table 4.25, factors affecting green practice level of exhibition venues from exhibitors' perceptions. The respondents perceived five factors that most effect green practice level of exhibition venues, including 'requiring for specifically skilled and qualified persons' ( $\bar{X} = 5.10$ ); 'the positive attitude of staff toward environmental preservation' ( $\bar{X} = 4.92$ ); 'the enthusiasm of staff to implement green policy' ( $\bar{X} = 4.88$ ); 'keeping consistency of implementation' ( $\bar{X} = 4.86$ ); and 'the awareness of staff to implement green policy' ( $\bar{X} = 4.85$ ). The rest factors were 'having clearly understanding about green policy' ( $\bar{X} = 4.77$ ); 'having knowledge

about environmental preservation' ( $\bar{X} = 4.76$ ); 'spending a long time training for specifically skilled persons' ( $\bar{X} = 4.75$ ); 'owning high maintenance costs to implement green policy' ( $\bar{X} = 4.73$ ); 'holding high training costs for specifically skilled persons' ( $\bar{X} = 4.71$ ); and 'using large amount of time to implement green policy' ( $\bar{X} = 4.63$ ). Finally, the study found that 'having high investment costs to implement green policy' ( $\bar{X} = 4.57$ ) was perceived as factors that least effect green practice level of exhibition venues.

#### 4.4 The Relationship between Exhibitors' Demographics and Green Practice Level of Exhibition Venues

To examine the influence of each exhibitor's demographics on green practice level of exhibition venues and to identify the most influential demographics on green practice level of exhibition venues, the following hypothesis was developed:

**Hypothesis 1:** Exhibitors' demographics has significant influence on green practice level of exhibition venue

From "T-test" and "ANOVA" methods, the study found the differences in exhibitors' demographics resulted to green practice level of exhibition venues as show in tables below.

##### 4.4.1 T-test Results

**Table 4.26:** "T-test" on green practice level of exhibition venues by exhibition venue

<i>Communication and Public Relations</i>	<i>t</i>	<i>Sig.</i>
The venue supports you to provide relevant information of your display booth via company's website and/or e-mail to avoid using handbills and brochures during the exhibition.	2.038	.042*

\*The mean difference is significant at the 0.05 level

**Table 4.26:** “T-test” on green practice level of exhibition venues by exhibition venue (cont.)

<i>Souvenirs</i>	<i>t</i>	<i>Sig.</i>
The venue promotes you to avoid distributing souvenirs.	2.525	.012*
The venue supports you to select souvenirs that can be easily manufactured within local area.	2.453	.015*
The venue promotes you to minimize packaging for souvenirs.	2.166	.031*

\*The mean difference is significant at the 0.05 level

Table 4.26 explores T-test results on green practice level of exhibition venues by the exhibition venues. The study found that the exhibition venues had statistically significant difference on green practice level regarding communication and public relations and souvenirs distribution.

At the mean difference of .342, the respondents from IMPACT had greater influence than the respondents from QSNCC on the item of ‘supporting exhibitors to provide relevant information of their display booth via company’s website and/or e-mails to avoid using handbills and brochures during the exhibition’ in communication and public relations category. In terms of souvenirs distribution, the study further revealed that the respondents from IMPACT had greater influence on the items of ‘promoting exhibitors to avoid distributing souvenirs’ (mean difference = .462); ‘supporting exhibitors to select souvenirs that can be easily manufacturing within local area’ (mean difference = .443); and ‘promoting exhibitors to minimize packaging for souvenirs’ (mean difference = .389) than the respondents from QSNCC.

**Table 4.27:** “T-test” on green practice level of exhibition venues by the green policy of exhibitors’ companies

<i>Exhibition Production</i>	<i>t</i>	<i>Sig.</i>
The venue informs you in advance about its efficient resource usage policy.	3.606	.000*
The venue guides you about how you can use efficient resource.	2.737	.006*
The venue informs you in advance about its waste reduction.	2.010	.045*
The venue guides you about how you can reduce waste.	2.850	.005*

\*The mean difference is significant at the 0.05 level

**Table 4.27:** “T-test” on green practice level of exhibition venues by the green policy of exhibitors’ companies (cont.)

<i>Exhibition Production</i>	<i>t</i>	<i>Sig.</i>
The venue informs you in advance about its chemical usage reduction policy.	2.299	.022*
The venue guides you about how you can reduce chemical usage.	2.093	.037*
The venue informs you in advance about its energy consumption reduction policy.	2.162	.031*
The venue guides you about how you can reduce energy consumption.	3.410	.001*
The venue supports you to reduce volume of foam, plastic, and paper usage for booth decorations and display materials.	3.453	.001*
The venue encourages you to selected reused materials from previous exhibitions that offered by the venue, for instance carpeting, system booths, and name badges.	2.160	.031*
The venue supports you to reuse materials from your previous exhibitions for booth decorations and display materials.	2.008	.045*
The venue supports you use recycled materials for booth decorations and display materials.	2.370	.018*
The venue encourages you to separate waste.	2.432	.015*
The venue prepares station for you to return the name badges after finishing the exhibition to reuse them for the upcoming exhibitions.	2.720	.007*
<i>Communication and Public Relations</i>		
The venue promotes the exhibition through the use of exhibition’s website, e-mail, and/or SMS on mobile phone.	2.112	.037*
The venue provides relevant information for exhibition via exhibition’s website and/or e-mail.	2.708	.007*
The venue supports you to provide relevant information of your display booth via company’s website and/or e-mail to avoid using handbills and brochures during the exhibition.	2.384	.018*
The venue offers electronic registration via exhibition’s website.	2.862	.004*
The venue provides a place to collect any unwanted printing materials from visitors upon exit for waste separation before recycling.	2.329	.020*

\*The mean difference is significant at the 0.05 level

**Table 4.27:** “T-test” on green practice level of exhibition venues by the green policy of exhibitors’ companies (cont.)

<i>Souvenirs</i>	<i>t</i>	<i>Sig.</i>
The venue promotes you to avoid distributing souvenirs.	2.168	.031*
The venue supports you to select useful objects as souvenirs, if souvenirs are needed.	2.574	.010*
The venue promotes you to select souvenirs made from environmental friendly materials.	2.558	.011*
The venue encourages you to select souvenirs made from recycled materials.	2.518	.012*
The venue advocates you to avoid materials from plants or animals facing extinction.	3.122	.002*
The venue encourages you to select souvenirs made from materials that can be easily found within local area.	2.282	.023*
The venue supports you to select souvenirs that can be easily manufactures within local area.	2.684	.008*
The venue promotes you to minimize packaging for souvenirs.	3.102	.002*
The venue advocates you to use recycled packaging for souvenirs.	2.886	.004*
The venue provides a place to collect any unwanted souvenirs from visitors upon exit to donate them to organization in need.	2.420	.016*

\*The mean difference is significant at the 0.05 level

Table 4.27 shows T-test results on green practice level of exhibition venues by the green policy of exhibitors’ companies. The findings indicated that the green policy of exhibitors’ companies had statistically significant differences on green practice level of exhibition venues regarding exhibition production, communication and public relations, and souvenirs distribution categories. In exhibition production category, the respondents from companies with green policy had greater influence on the items of ‘informing exhibitors in advance about efficient resources usage policy’ (mean difference = .847); ‘guiding exhibitors about how they can use efficient resources’ (mean difference = .617); ‘informing exhibitors in advance about waste reduction policy’ (mean difference = .456); ‘guiding exhibitors about how they can reduce waste’ (mean difference = .715); ‘informing exhibitors in advance about

reducing chemical usage policy' (mean difference = .536); 'guiding exhibitors about how they can reduce chemical usage' (mean difference = .499); 'informing exhibitors in advance about energy consumption reduction policy' (mean difference = .481); and 'guiding exhibitors about how they can reduce energy consumption' (mean difference = .772) than the respondents from companies without green policy.

Moreover, the results also showed that the respondents from companies with green policy had greater influence than the respondents from companies without green policy on the items 'supporting exhibitors to reduce volume of foam, plastic, and paper usage for booth decorations and display materials' (mean difference = .765); 'encouraging exhibitors to selected reused materials from previous exhibitions offered by the venues, for instance carpeting, system booths, and name badges' (mean difference = .476); 'supporting exhibitors to reuse materials from exhibitors' previous exhibitions for booth decorations and display materials' (mean difference = .452); 'supporting exhibitors use recycled materials for booth decorations and display materials' (mean difference = .530); 'encouraging exhibitors to separate waste' (mean difference = .560); and 'preparing stations for exhibitors to return the name badges after finishing the exhibition to reuse them for upcoming exhibitions' (mean difference = .658) in the category of exhibition production.

In terms of communication and public relations, the finding indicated that the respondents from companies with green policy had greater influence on the items of 'promoting the exhibition using exhibition's website, e-mails, and/or SMSs on mobile phones' (mean difference = .506); 'providing relevant information regarding exhibition via exhibition's website and/or e-mails' (mean difference = .572); 'supporting exhibitors to provide relevant information regarding their display booth via company's website and/or e-mails to avoid using handbills and brochures during the exhibition' (mean difference = .506); 'offering electronic registration via exhibition's website' (mean difference = .627); and 'providing a place to collect any unwanted printed materials from visitors upon exiting for waste separation before recycling' (mean difference = .512) than the respondents from companies without green policy.

About souvenirs category, this study explored those respondents from companies with green policy had greater influence on the items of 'promoting exhibitors to avoid distributing souvenirs' (mean difference = .504); 'supporting

exhibitors to select useful objects as souvenirs, if souvenirs are needed’ (mean difference = .599); ‘promoting exhibitors to select souvenirs made from environmental friendly materials’ (mean difference = .597); ‘encouraging exhibitors to select souvenirs made from recycled materials’ (mean difference = .583); and ‘advocating exhibitors to avoid materials from plants or animals facing extinction’ (mean difference = .738) than the respondents from companies without green policy.

Furthermore, the findings also indicated that the respondents from companies with green policy had greater influence than the respondents from companies without green policy on the items of ‘encouraging exhibitors to select souvenirs made from materials that can be easily found within local area’ (mean difference = .534); ‘supporting exhibitors to select souvenirs that can be easily manufacturing within local area’ (mean difference = .614); ‘promoting exhibitors to minimize packaging for souvenirs’ (mean difference = .702); ‘advocating exhibitors to use recycled packaging for souvenirs’ (mean difference = .649); and ‘providing a place to collect any unwanted souvenirs from visitors upon exiting in order to donate them to organization in need’ (mean difference = .566) in the category of souvenirs.

**Table 4.28:** “T-test” on green practice level of exhibition venues by the familiarity with green exhibition guideline

<i>Exhibition Production</i>	<i>t</i>	<i>Sig.</i>
The venue informs you in advance about its efficient resource usage policy.	2.011	.045*
The venue guides you about how you can reduce waste.	2.244	.026*
The venue informs you in advance about its chemical usage reduction policy.	2.305	.022*

\*The mean difference is significant at the 0.05 level

Table 4.28 demonstrates T-test results on green practice level of exhibition venues by the familiarity with green exhibition guideline. The study found that the familiarity with green exhibition guideline had statistically significant difference on green practice level of exhibition venues regarding exhibition production category in three items. The respondents who were familiar with green exhibition guideline had

greater influence than the respondents who were not familiar with any green exhibition guideline on the items of ‘informing exhibitors in advance about efficient resources usage policy’ (mean difference = .417); ‘guiding exhibitors about how they can reduce waste’ (mean difference = .426); and ‘informing exhibitors in advance about chemical usage reduction policy’ (mean difference = .469).

#### 4.4.2 ANOVA Results

**Table 4.29:** “ANOVA” on green practice level of exhibition venues by type of business

<i>Exhibition Production</i>	<i>F</i>	<i>Sig.</i>
The venue guides you about how you can use efficient resource.	2.152	.047*
The venue reduces usage of foam, plastic, and paper decorations on stage and/or exhibition area.	3.617	.002*
The venue supports you to reduce volume of foam, plastic, and paper usage for booth decorations and display materials.	2.906	.009*
The venue supports you to reuse materials from your previous exhibitions for booth decorations and display materials.	2.673	.015*
The venue supports you to use recycled materials for booth decorations and display materials.	3.149	.005*
The venue encourages you to reduce electricity use in the booth.	2.456	.024*
The venue prepares waste bin for recycling garbage categorized by paper, plastic bottles, glass, and cans.	2.367	.029*
The venue prepares station for you to return the name badges after finishing the exhibition to reuse them for the upcoming exhibitions.	3.142	.005*
<i>Communication and Public Relations</i>		
The venue offers electronic registration via exhibition’s website.	2.794	.011*
<i>Souvenirs</i>		
The venue promotes you to avoid distributing souvenirs.	3.574	.002*
The venue supports you to select useful objects as souvenirs, if souvenirs are needed.	2.339	.031*

\*The mean difference is significant at the 0.05 level

**Table 4.29:** “ANOVA” on green practice level of exhibition venues by type of business (cont.)

<i>Souvenirs</i>	<i>F</i>	<i>Sig.</i>
The venue promotes you to select souvenirs made from environmental friendly materials.	2.733	.013*
The venue encourages you to select souvenirs made from recycled materials.	3.342	.003*
The venue encourages you to select souvenirs made from materials that can be easily found within local area.	2.586	.018*
The venue supports you to select souvenirs that can be easily manufactured within local area.	3.274	.004*
The venue promotes you to minimize packaging for souvenirs.	4.201	.000*
The venue advocates you to use recycled packaging for souvenirs.	2.495	.022*

\*The mean difference is significant at the 0.05 level

According to Table 4.29, ANOVA results on green practice level of exhibition venues by type of business. At significant level of 0.05, the study found that type of business had statistically significant difference on green practice level of exhibition venues regarding exhibition production, communication and public relations, and souvenir distribution categories.

In exhibition production category, type of business had influenced on 8 of 17 items, including ‘guiding exhibitors about how they can use efficient resources’; ‘reducing usage of foam, plastic, and paper decorations on stages and/or exhibition areas’; ‘supporting exhibitors to reduce volume of foam, plastic, and paper usage for booth decorations and display materials’; ‘supporting exhibitors to reuse materials from previous exhibitions for booth decorations and display materials’; ‘supporting exhibitors to use recycled materials for booth decorations and display materials’; ‘encouraging exhibitors to reduce electricity use in the booths’; ‘preparing waste bins for recycling garbage’; and ‘preparing stations for exhibitors to return the name badges after finishing the exhibition in order to reuse them for upcoming exhibitions’.

Moreover, the study revealed that type of business had influenced green practice level of exhibition venues on the item of ‘offering electronic registration via exhibition’s website’ in communication and public relations category. In addition, the

findings indicated that type of business had influenced green practice level of exhibition venues on several items in souvenir distribution category, including ‘promoting exhibitors to avoid distributing souvenirs’; ‘supporting exhibitors to select useful objects as souvenirs’; ‘promoting exhibitors to select souvenirs made from environmental friendly materials’; ‘encouraging exhibitors to select souvenirs made from recycled materials’; ‘encouraging exhibitors to select souvenirs made from materials that can be easily found within local area’; ‘supporting exhibitors to select souvenirs that can be easily manufacturing within local area’; ‘promoting exhibitors to minimize packaging for souvenirs’; and ‘advocating exhibitors to use recycled packaging for souvenirs’.

**Table 4.30:** “Post Hoc” on green practice level of exhibition venues by type of business

<i>Exhibition Production</i>	<i>(I)Types of business</i>	<i>(J) Types of business</i>	<i>Mean Difference (I-J)</i>
The venue reduces usage of foam, plastic, and paper decorations on stage and/or exhibition area.	Textile and Jewelry	Food and Beverage	.156
		Home and Furniture	.989
	Jewelry	Book and Printing media	.969*
		Electrical and Electronic appliance	.234
		Health and Beauty	.056
		Others	.840
The venue supports you to reduce volume of foam, plastic, and paper usage for booth decorations and display materials.	Textile and Jewelry	Food and Beverage	.312
		Home and Furniture	.812
	Jewelry	Book and Printing media	.905*
		Electrical and Electronic appliance	.640
		Health and Beauty	-.013
		Others	.715
The venue supports you to reuse materials from your previous exhibitions for booth decorations	Textile and Jewelry	Food and Beverage	.042
		Home and Furniture	.924
	Jewelry	Book and Printing media	.838*

**Table 4.30:** “Post Hoc” on green practice level of exhibition venues by type of business (cont.)

<i>Exhibition Production</i>	<i>(I)Types of business</i>	<i>(J) Types of business</i>	<i>Mean Difference (I-J)</i>
and display materials.  The venue prepares station for you to return the name badges after finishing the exhibition to reuse them for the upcoming exhibitions.	Health and Beauty	Electrical and Electronic appliance	.700
		Health and Beauty	.041
		Others	.740
		Food and Beverage	.379
		Textile and Jewelry	.551
		Home and Furniture	1.358
		Book and Printing media	1.041
		Electrical and Electronic appliance	.822
		Others	1.332*
<i>Souvenirs</i>			
The venue promotes you to avoid distributing souvenirs.	Textile and Jewelry	Food and Beverage	-.086
		Home and Furniture	-.194
		Book and Printing media	.938*
		Electrical and Electronic appliance	.394
		Health and Beauty	-.078
		Others	.668
		The venue encourages you to select souvenirs made from recycled materials.	Textile and Jewelry
Home and Furniture	.362		
Book and Printing media	.855*		
Electrical and Electronic appliance	.487		
Health and Beauty	-.263		
Others	.829		

**Table 4.30:** “Post Hoc” on green practice level of exhibition venues by type of business (cont.)

<i>Souvenirs</i>	<i>(I)Types of business</i>	<i>(J) Types of business</i>	<i>Mean Difference (I-J)</i>
	Health and Beauty	Food and Beverage	.323
		Textile and Jewelry	.263
		Home and Furniture	.625
		Book and Printing media	1.118*
		Electrical and Electronic appliance	.750
		Others	1.092
		The venue encourages you to select souvenirs made from materials that can be easily found within local area.	Textile and Jewelry
Home and Furniture	.562		
Book and Printing media	.949*		
Electrical and Electronic appliance	.718		
Health and Beauty	.037		
Others	.627		
The venue supports you to select souvenirs that can be easily manufactured within local area.	Textile and Jewelry		
		Home and Furniture	.215
		Book and Printing media	1.079*
		Electrical and Electronic appliance	.799
		Health and Beauty	.199
		Others	.544
		The venue promotes you to minimize packaging for souvenirs.	Textile and Jewelry
Home and Furniture	.288		
Book and Printing media	1.148*		
Electrical and Electronic appliance	.747		
Health and Beauty	.322		
Others	1.036*		

**Table 4.30:** “Post Hoc” on green practice level of exhibition venues by type of business (cont.)

<i>Souvenirs</i>	<i>(I)Types of business</i>	<i>(J) Types of business</i>	<i>Mean Difference (I-J)</i>
The venue advocates you to use recycled packaging for souvenirs.	Textile	Food and Beverage	.374
	and	Home and Furniture	.380
	Jewelry	Book and Printing media	.888*
		Electrical and Electronic appliance	.724
		Health and Beauty	.105
		Others	.726

Table 4.30 explains the post hoc test on green practice level of exhibition venues by type of business. In exhibition production category, the study revealed that the respondents from group of textile and jewelry businesses had greater influence on green practice level of exhibition venues than the respondents from group of book and printing media businesses on the items of ‘reducing usage of foam, plastic, and paper decorations on stage and/or exhibition area’ (mean difference = .969); ‘supporting exhibitors to reduce volume of foam, plastic, and paper usage for booth decorations and display materials’ (mean difference = .905); and ‘supporting exhibitors to reuse materials from previous exhibitions for booth decorations and display materials’ (mean difference = .838). Meanwhile the respondents from group of health and beauty businesses had greater influence on green practice level of exhibition venues than the respondents from group of other businesses on the item of ‘preparing stations for exhibitors to return the name badges after finish the exhibition in order to reuse them for upcoming exhibitions’ with the mean difference of 1.332.

In souvenir distribution category, the study also found that the respondents from group of textile and jewelry businesses had greater influence than book and printing media businesses on green practice level of exhibition venues regarding following items: ‘promoting exhibitors to avoid distributing souvenirs’ (mean difference = .938); ‘encouraging exhibitors to select souvenirs made from recycled materials’ (mean difference = .855); ‘encouraging exhibitors to select souvenirs made from

materials that can be easily found within local area' (mean difference = .949); 'supporting exhibitors to select souvenirs that can be easily manufacturing within local area' (mean difference = 1.079); 'promoting exhibitors to minimize packaging for souvenirs' (mean difference = 1.148); and 'advocating exhibitors to use recycled packaging for souvenirs' (mean difference = .888).

Furthermore, the results indicated that the respondents from group of health and beauty businesses had greater influence on green practice level of exhibition venues than the respondents from group of book and printing media businesses on the item of 'encouraging exhibitors to select souvenirs made from recycled materials', which the mean difference is 1.118. In addition, at the mean difference of 1.036, the respondents from group of textile and jewelry businesses had greater influence than group of other businesses on the item of 'promoting exhibitors to minimize packaging for souvenirs'.

**Table 4.31:** "ANOVA" on green practice level of exhibition venues by size of company

<i>Exhibition Production</i>	<i>F</i>	<i>Sig.</i>
The venue supports you to reduce volume of foam, plastic, and paper usage for booth decorations and display materials.	3.839	.022*
<i>Communication and Public Relations</i>		
The venue encourages you to reduce paper usage such as handbills and brochures as media.	4.030	.019*

\*The mean difference is significant at the 0.05 level

According to Table 4.31, ANOVA results on green practice level of exhibition venues by sizes of company. The findings indicated that size of company had statistically significant difference on green practice level of exhibition venues regarding exhibition production and communication and public relations categories. By size of company had influence on the items of 'supporting exhibitors to reduce volume of foam, plastic, and paper usage for booth decorations and display materials' in exhibition production category. Moreover, size of company also had influence on the item of 'encouraging exhibitors to reduce paper usage such as handbills and brochures as media' in communication and public relations category.

**Table 4.32:** “Post Hoc” on green practice level of exhibition venues by size of company

<i>Exhibition Production</i>	<i>(I) Sizes of company</i>	<i>(J) Sizes of company</i>	<i>Mean Difference (I-J)</i>
The venue supports you to reduce volume of foam, plastic, and paper usage for booth decorations and display materials.	Large	Small	.369
		Medium	.762*
<i>Communication and Public Relations</i>			
The venue encourages you to reduce paper usage such as handbills and brochures as media.	Large	Small	.535
		Medium	.802*

Furthermore, the post hoc test (Table 4.32) revealed that, in exhibition category, the respondents from large-sized companies had greater influence on green practice level of exhibition venues than the respondents from medium-sized companies on the item of ‘supporting exhibitors to reduce volume of foam, plastic, and paper usage for booth decorations and display materials’ with the mean difference of .762.

In communication and public relations category, the results showed that the respondents from large-sized companies had greater influence on green practice level of exhibition venues than the respondents from medium-sized companies on the item of ‘encouraging exhibitors to reduce paper usage such as handbills and brochures as media’, which the mean difference is .802.

#### **4.5 The Relationship between Exhibitors’ Demographics and Factors Affecting Green Practice Level of Exhibition Venues**

To examine the influence of each exhibitor’s demographics on factors affecting green practice level of exhibition venues and to identify the most influential characteristics on factors affecting green practice level of exhibition venues, the following hypothesis was developed:

**Hypothesis 2:** Exhibitors' demographics has significant influence on factors affecting green practice level of exhibition venue

From "T-test" and "ANOVA" methods, the study found the differences in exhibitors' demographics resulted to factors affecting green practice level of exhibition venues as show in tables below.

#### 4.5.1 T-test Results

**Table 4.33:** "T-test" on factors affecting green practice level of exhibition venues by the exhibition venues

<i>Factors Affecting Green Practice Level</i>	<i>t</i>	<i>Sig.</i>
The venue holds high training cost for specific skills and qualified person	2.371	.018*
The venue spends long time for training for specific skills and qualified person	2.123	.034*
The staff of venue have the knowledge about environmental preservation.	2.045	.042*

\*The mean difference is significant at the 0.05 level

Table 4.33 describes T-test results on factors affecting green practice level of exhibition venues by the exhibition venues. The study revealed that the exhibition venue itself had statistically significant difference on factors affecting green practice level of exhibition venues which the respondents from IMPACT perceived the significance of 'holding high training costs for specifically skilled and qualified persons' (mean difference = .374); 'spending long time training for specifically skilled and qualified persons' (mean difference = .336); and 'the knowledge of staff about environmental preservation' (mean difference = .341) more than the respondents from QSNCC.

**Table 4.34:** "T-test" on factors affecting green practice level of exhibition venues by the green policy of exhibitors' companies

<i>Factors Affecting Green Practice Level</i>	<i>t</i>	<i>Sig.</i>
The venue requires for specific skills and qualified person to implement green policy.	2.113	.035*
The venue holds high training cost for specific skills and qualified person.	1.972	.049*
The staff of venue have the knowledge about environmental preservations.	2.280	.023*

**Table 4.34:** “T-test” on factors affecting green practice level of exhibition venues by the green policy of exhibitors’ companies (cont.)

<i>Factors Affecting Green Practice Level</i>	<i>t</i>	<i>Sig.</i>
The staff of venue have positive attitude toward environmental preservations.	2.821	.005*
The staff of venue have clear understanding about green policy before implementation.	2.716	.007*
The staff of venue have an awareness to implement green policy.	2.375	.018*
The staff of venue is enthusiastic to implement green policy.	2.921	.004*

\*The mean difference is significant at the 0.05 level

According to Table 4.34, T-test results of factors affecting green practice level of exhibition venues by the green policy of exhibitors’ companies. The findings indicated that green policy of exhibitors’ companies had statistically significant difference on factors affecting green practice level of exhibition venues. The respondents from the company with green policy perceived the significance of ‘the requirement of specifically skilled and qualified persons to implement green policy’ (mean difference = .416); ‘holding high training costs for specifically skilled and qualified persons’ (mean difference = .395); ‘the knowledge of staff about environmental preservations’ (mean difference = .481); ‘the positive attitude of staff toward environmental preservations’ (mean difference = .571); ‘clearly understanding of staff regarding green policy before implementation’ (mean difference = .568); ‘the awareness of staff to implement green policy’ (mean difference = .483); and ‘the enthusiasm of staff to implement green policy’ (mean difference = .605) more than the respondents from company without holding green policy.

**Table 4.35:** “T-test” on factors affecting green practice level of exhibition venues by the familiarity with green exhibition guideline

<i>Factors Affecting Green Practice Level</i>	<i>t</i>	<i>Sig.</i>
The staff of venue have the knowledge about environmental preservation.	2.262	.024*
The staff of venue have positive attitude toward environmental preservation.	2.092	.037*
The staff of venue is enthusiastic to implement green policy.	2.547	.011*

\*The mean difference is significant at the 0.05 level

Table 4.35 demonstrates T-test results on factors affecting green practice level of exhibition venues by the familiarity with green exhibition guideline of exhibitors. The study revealed that the familiarity with green exhibition guideline had statistically significant difference on factors affecting green practice level of exhibition venues. The respondents who were familiar with green exhibition guideline perceived the significance of ‘the knowledge of staff about environmental preservations’ (mean difference = .416); ‘the positive attitude of staff toward environmental preservations’ (mean difference = .371); and ‘the enthusiasm of staff to implement green policy’ (mean difference = .461) more than the respondents who were not familiar with any green exhibition guideline.

#### 4.5.2 ANOVA Results

**Table 4.36:** “ANOVA” on factors affecting green practice level of exhibition venues by number of times exhibited

<i>Factors Affecting Green Practice Level</i>	<i>F</i>	<i>Sig.</i>
The venue holds high training cost for specific skills and qualified person.	3.229	.022*
The venue spends long time for training for specific skills and qualified person.	2.719	.044*

\*The mean difference is significant at the 0.05 level

Regarding to Table 4.36, ANOVA results on factors affecting green practice level of exhibition venues by number of times exhibited. The findings showed that number of times exhibited of exhibitors had statistically significant difference on factors affecting green practice level of exhibition venues regarding the items of ‘holding high training costs for specifically skilled persons’ and ‘spending long time training for specifically skilled persons’.

**Table 4.37:** “Post Hoc” on factors affecting green practice level of exhibition venues by number of times exhibited

<i>Factors Affecting Green Practice Level</i>	<i>(I)Times exhibited</i>	<i>(J) Times exhibited</i>	<i>Mean Difference (I-J)</i>
The venue holds high training cost for specific skills and qualified person.	2-5 times	Once	-.056
		6-10 times	.155
		> 10 times	.506*

Furthermore, the post hoc test as showing in Table 4.37 found that, at the mean difference of .506, the respondents who had exhibited 2-5 times perceived the significance of ‘holding high training costs for specifically skilled persons’ more than the respondents who had exhibited more than 10 times.

**Table 4.38:** “ANOVA” on factors affecting green practice level of exhibition venues by type of business

<i>Factors Affecting Green Practice Level</i>	<i>F</i>	<i>Sig.</i>
The venue has high investment cost to implement green policy.	2.804	.011*
The venue uses large amount of time to implement green policy.	2.744	.013*
The venue spends long time for training for specific skills and qualified person.	2.772	.012*
The staff of venue have the knowledge about environment preservation.	2.428	.026*
The staff of venue have clear understanding about green policy before implementation.	2.253	.038*
The staff of venue have an awareness to implement green policy.	2.120	.050*

\*The mean difference is significant at the 0.05 level

Table 4.38 describes ANOVA results on factors affecting green practice level of exhibition venues by type of business. The results indicated that type of business had statistically significant difference on factors affecting green practice level of exhibition venues on the items of ‘having high investment costs to implement green policy’; ‘using large amount of time to implement green policy’; ‘spending long time training for specifically skilled persons’; ‘having knowledge about environment

preservation’; ‘having clearly understanding about green policy’; and ‘having an awareness to implement green policy’.

**Table 4.39:** “Post Hoc” on factors affecting green practice level of exhibition venues by type of business

<i>Factors Affecting Green Practice Level</i>	<i>(I)Types of business</i>	<i>(J) Types of business</i>	<i>Mean Difference (I-J)</i>
The venue uses large amount of time to implement green policy.	Food and Beverage	Textile and Jewelry	.224
		Home and Furniture	.646
		Book and Printing media	.762
		Electrical and Electronic appliance	.584
		Health and Beauty	.171
		Others	1.006*
The venue spends long time for training for specific skills and qualified person.	Food and Beverage	Textile and Jewelry	.513
		Home and Furniture	.376
		Book and Printing media	1.007*
		Electrical and Electronic appliance	.496
		Health and Beauty	.118
		Others	.626
The staff of venue have the knowledge about environment preservation.	Food and Beverage	Textile and Jewelry	.423
		Home and Furniture	.501
		Book and Printing media	.996*
		Electrical and Electronic appliance	.465
		Health and Beauty	.168
		Others	.696

Table 4.39 shows the post hoc test on factors affecting green practice level of exhibition venues by type of business. The study revealed that the respondents from group of food and beverage businesses perceived the significance of ‘using large amount of time to implement green policy’ more than the respondents from group of other businesses, which the mean difference is 1.006. In addition, the study also found that the respondents from group of food and beverage businesses perceived the significance of ‘spending long time training for specifically skilled persons’ and ‘having knowledge about environment preservation’ more than the respondents from group of book and printing media businesses at the mean difference of 1.007 and .996, respectively.

**Table 4.40:** “ANOVA” on factors affecting green practice level of exhibition venues by size of company

<i>Factors Affecting Green Practice Level</i>	<i>F</i>	<i>Sig.</i>
The venue uses large amount of time to implement green policy.	3.072	.047*
The venue owns high maintenance cost to implement green policy.	4.495	.012*
The venue holds high training cost for specific skills and qualified person.	3.333	.037*
The venue spends long time for training for specific skills and qualified person.	3.626	.028*
The staff of venue are enthusiastic to implement green policy.	3.694	.026*

\*The mean difference is significant at the 0.05 level

According to Table 4.40, ANOVA results on factors affecting green practice level of exhibition venues by size of company. The study found the statistically significant difference on several items, including ‘using large amount of time to implement green policy’; ‘owning high maintenance costs to implement green policy’; ‘holding high training costs for specifically skilled persons’; ‘spending long time training for specifically skilled persons’; and ‘the enthusiasm of staff to implement green policy’.

**Table 4.41:** “Post Hoc” on factors affecting green practice level of exhibition venues by size of company

<i>Factors Affecting Green Practice Level</i>	<i>(I) Sizes of company</i>	<i>(J) Sizes of company</i>	<i>Mean Difference (I-J)</i>
The venue uses large amount of time to implement green policy.	Large	Small	.225
		Medium	.612*
The venue owns high maintenance cost to implement green policy.	Small	Medium	.496*
		Large	-.223
	Large	Small	.223
		Medium	.719*
The venue holds high training cost for specific skills and qualified person.	Large	Small	.388
		Medium	.632*
The venue spends long time for training for specific skills and qualified person.	Large	Small	.398
		Medium	.661*
The staff of venue are enthusiastic to implement green policy.	Large	Small	.435
		Medium	.689*

Furthermore, the post hoc test in Table 4.41 showed that the respondents from large-sized companies perceived the significance of ‘using large amount of time to implement green policy’ (mean difference = .612); ‘owning high maintenance costs to implement green policy’ (mean difference = .719), ‘holding high training costs for specifically skilled persons’ (mean difference = .632); ‘spending long time training for specifically skilled persons’ (mean difference = .661); and ‘the enthusiasm of staff to implement green policy’ (mean difference = .689) above the respondents from medium-sized companies. In addition, at the mean difference of .496, the results indicated that the respondents from small-sized companies also perceived the significance of ‘owning high maintenance costs to implement green policy’ above the respondents from medium-sized companies.

#### **4.6 The Relationship between Factors Affecting Green Practice Level and Green Practice Level of Exhibition Venues**

To examine the influence of factors affecting green practice level on green practice level of exhibition venues, the following hypothesis were developed:

**Hypothesis 3:** Exhibition venue has significant influence on green practice level regarding exhibition production

**Hypothesis 4:** Staff has significant influence on green practice level regarding exhibition production

The results of the multiple regression analysis revealed that both exhibition venue and staff factors had a significant influence on green practice level regarding exhibition production. The *F*-ratio in the ANOVA table (Table 4.42) shows that the regression model is a good fit for the data which the exhibition venue and staff factors (independent variables) statistically significantly predict the green practice level regarding exhibition production (dependent variable),  $F(2, 391) = 236.872, p < .05$ .

**Table 4.42:** ANOVA table of multiple regression analysis between factors affecting green practice level and green practice level regarding exhibition production

<i>Model</i>	<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
Regression	461.390	2	230.695	236.872	.000*
Residual	380.804	391	.899		
Total	842.194	393			

a. Predictors: (Constant), Staff Factor, Exhibition Venue Factor

b. Dependent Variable: Exhibition Production

**Table 4.43:** Model Summary table of multiple regression analysis between factors affecting green practice level and green practice level regarding exhibition production

<i>Model</i>	<i>R</i>	<i>R Square</i>	<i>Adjusted R Square</i>	<i>Std. Error of the Estimate</i>	<i>Durbin-Watson</i>
	.740	.548	.546	.98688	2.107

a. Predictors: (Constant), Staff Factor, Exhibition Venue Factor

b. Dependent Variable: Exhibition Production

Moreover, the  $R$  and  $R^2$  value in the Model Summary table used to determine how well a regression model fits the data. According to Chelliah and Kwon (2011), the  $R$  value which is above 0.5 is considered good. It means that the dependent variable can be explained clearly by all of the independent variables. As shown in Table 4.43, the  $R$  value of 0.769 indicates a good level of prediction which the exhibition venue and staff factors can explain the variability of green practice level regarding exhibition production for 54.8% ( $R = .740$ ,  $R^2 = .548$ ).

**Table 4.44:** Collinearity statistics table of multiple regression analysis between factors affecting green practice level and green practice level regarding exhibition production

<i>Model</i>	<i>Collinearity Statistics</i>	
	<i>Tolerance</i>	<i>VIF</i>
Exhibition Venue	.399	2.504
Staff	.399	2.504

Dependent Variable: Exhibition Production

The presence of multicollinearity statistics which is a statistical phenomenon when two or more predictors in the model are highly correlated was tested also. If the variance inflation factor (VIF) is equal or more than 10, it means that the variables in the model measure the same relationship. However, Table 4.44 shows that both exhibition venue (VIF = 2.504) and staff factors (VIF = 2.504) had VIF value less than 10 which means there is no multicollinearity.

**Table 4.45:** Coefficients table of multiple regression analysis between factors affecting green practice level and green practice level regarding exhibition production

<i>Model</i>	<i>Unstandardized</i>		<i>Standardized</i>		<i>t</i>	<i>Sig.</i>
	<i>Coefficients</i>		<i>Coefficients</i>			
	<i>B</i>	<i>Std. Error</i>	<i>Beta</i>			
Exhibition Venue	.257	.059	.235		4.365	.000*
Staff	.521	.052	.543		10.092	.000*

Dependent Variable: Exhibition Production

Table 4.45 shows the standardized coefficients that indicate how much the dependent variable varies with an independent variable, when all other independent variables are held constant. It was possible to estimate the influence of each factor on green practice level regarding exhibition production. Based on the results found that staff factor (Beta = .543) had the highest influence on green practice level of exhibition production, followed by exhibition venue factor (Beta = .235).

Further considered the value of  $p$ -value ( $p < .05$ ), it can concluded that there is a significant positive relationship between exhibition venue factor and green practice level of exhibition production and between staff factor and green practice level of exhibition production as well.

**Hypothesis 5:** Exhibition venue has significant influence on green practice level regarding communication and public relations

**Hypothesis 6:** Staff has significant influence on green practice level regarding communication and public relations

The results of the multiple regression analysis explored that both exhibition venue and staff factors had a significant influence on green practice level regarding communication and public relations. The  $F$ -ratio in the ANOVA table (Table 4.46) shows that the regression model is a good fit for the data which the exhibition venue and staff factors (independent variables) statistically significantly predict the green practice level regarding communication and public relations (dependent variable),  $F(2, 391) = 236.872, p < .05$ .

**Table 4.46:** ANOVA table of multiple regression analysis between factors affecting green practice level and green practice level regarding communication and public relations

<i>Model</i>	<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
Regression	461.390	2	230.695	236.872	.000*
Residual	380.804	391	.974		
Total	842.194	393			

a. Predictors: (Constant), Staff Factor, Exhibition Venue Factor

b. Dependent Variable: Communication and Public Relations

**Table 4.47:** Model Summary table of multiple regression analysis between factors affecting green practice level and green practice level regarding communication and public relations

<i>Model</i>	<i>R</i>	<i>R Square</i>	<i>Adjusted R Square</i>	<i>Std. Error of the Estimate</i>	<i>Durbin-Watson</i>
	.740	.548	.546	.98688	2.107

a. Predictors: (Constant), Staff Factor, Exhibition Venue Factor

b. Dependent Variable: Communication and Public Relations

Table 4.47, the Model Summary table, shows the R value of 0.740 which indicated a good level of prediction and the R<sup>2</sup> value of 0.548 that means the exhibition venue and staff factors can explain the variability of green practice level regarding communication and public relations for 54.8%.

**Table 4.48:** Collinearity statistics table of multiple regression analysis between factors affecting green practice level and green practice level regarding communication and public relations

<i>Model</i>	<i>Collinearity Statistics</i>	
	<i>Tolerance</i>	<i>VIF</i>
Exhibition Venue	.399	2.504
Staff	.399	2.504

Dependent Variable: Communication and Public Relations

According to Table 4.48, the study found that there is no multicollinearity which the VIF value of exhibition venue and staff factors is equal 2.504. Moreover, based on the standardized beta coefficient value of each factor as shown in Table 4.49 indicated that staff factor (Beta = .543) had the highest influence on green practice level regarding communication and public relations, followed by exhibition venue factor (Beta = .235).

**Table 4.49:** Coefficients table of multiple regression analysis between factors affecting green practice level and green practice level regarding communication and public relations

<i>Model</i>	<i>Unstandardized Coefficients</i>		<i>Standardized Coefficients</i>	<i>t</i>	<i>Sig.</i>
	<i>B</i>	<i>Std. Error</i>	<i>Beta</i>		
Exhibition Venue	.257	.059	.235	4.365	.000*
Staff	.521	.052	.543	10.092	.000*

Dependent Variable: Communication and Public Relations

Further considered the value of  $p$ -value ( $p < .05$ ), it can concluded that there is a significant positive relationship between exhibition venue dimension and green practice level regarding communication and public relations and between staff dimension and green practice level regarding communication and public relations.

**Hypothesis 7:** Exhibition venue has significant influence on green practice level regarding souvenirs distribution

**Hypothesis 8:** Staff has significant influence on green practice level regarding souvenirs distribution

The results of the multiple regression analysis explained that both exhibition venue and staff factors had a significant influence on green practice level regarding souvenirs distribution. The  $F$ -ratio in the ANOVA table (Table 4.50) shows that the regression model is a good fit for the data which the exhibition venue and staff factor (independent variables) statistically significantly predict the green practice level of souvenirs distribution (dependent variable),  $F(2, 391) = 319.576, p < .05$ .

**Table 4.50:** ANOVA table of multiple regression analysis between factors affecting green practice level and green practice level regarding souvenirs distribution

<i>Model</i>	<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
Regression	651.347	2	325.673	319.576	.000*
Residual	398.460	391	1.019		
Total	1049.807	393			

a. Predictors: (Constant), Staff Factor, Exhibition Venue Factor

b. Dependent Variable: Souvenirs Distribution

**Table 4.51:** Model Summary table of multiple regression analysis between factors affecting green practice level and green practice level regarding souvenirs distribution

<i>Model</i>	<i>R</i>	<i>R Square</i>	<i>Adjusted R Square</i>	<i>Std. Error of the Estimate</i>	<i>Durbin-Watson</i>
	.788	.620	.619	1.00949	2.065

a. Predictors: (Constant), Staff Factor, Exhibition Venue Factor

b. Dependent Variable: Souvenirs Distribution

Table 4.51, the Model Summary table, reveals the R value of 0.788 which indicated a good level of prediction. Besides, the R<sup>2</sup> value of 0.620 means the exhibition venue and staff factors can explain the variability of green practice level on souvenirs distribution for 62.0%.

**Table 4.52:** Collinearity statistics table of multiple regression analysis between factors affecting green practice level and green practice level regarding souvenirs distribution

<i>Model</i>	<i>Collinearity Statistics</i>	
	<i>Tolerance</i>	<i>VIF</i>
Exhibition Venue	.399	2.504
Staff	.399	2.504

Dependent Variable: Souvenirs Distribution

According to Table 4.52, the results show that there is no multicollinearity which the VIF value of exhibition venue and staff factors is equal 2.504. Moreover, based on the standardized beta coefficient value of each factor as shown in Table 4.53 indicated that staff factor (Beta = .689) had the highest influence on green practice level regarding souvenirs distribution, followed by exhibition venue factor (Beta = .122).

**Table 4.53:** Coefficients table of multiple regression analysis between factors affecting green practice level and green practice level regarding souvenirs distribution

<i>Model</i>	<i>Unstandardized</i>		<i>Standardized</i>		<i>Sig.</i>
	<i>Coefficients</i>		<i>Coefficients</i>		
	<i>B</i>	<i>Std. Error</i>	<i>Beta</i>	<i>t</i>	
Exhibition Venue	.149	.060	.122	2.477	.014*
Staff	.738	.053	.689	13.979	.000*

Dependent Variable: Souvenirs Distribution

Finally considered the value of  $p$ -value ( $p < .05$ ), it can concluded that there is a significant positive relationship between exhibition venue factor and green practice level regarding souvenirs distribution and between staff factor and green practice level regarding souvenirs distribution.

## **CHAPTER V**

### **DISCUSSIONS**

This study was conducted in order to explore the current situation regarding green exhibition in Thailand, particularly the implementation of green policy by exhibition venues from the exhibitors' perspectives. Therefore, this study intends to examine the green practice level of exhibition venues in Thailand regarding TCEB's Green Exhibition Guideline. The results of this study could lead to understanding the relationship between exhibitors' demographics and the level of green policy implementation by exhibition venues. Furthermore, this study also attempts to identify the factors affecting green practice level of exhibition venues in Thailand that might differ according to exhibitors' demographics.

As there are limited previous studies which have discussed this topic, therefore this study may not be compared or discussed relevant to other studies. The findings of the study through questionnaire survey are discussed in the following sections.

#### **5.1 Summary of Exhibitors' Demographics**

The respondents of this study were derived from two exhibition venues in Thailand, namely Queen Sirikit National Convention Center (QSNCC) and IMPACT Arena, Convention and Exhibition Center (IMPACT). The respondents from QSNCC represented a slightly higher proportion at 51.50%. In terms of number of times exhibited, the respondents who had exhibited more than 10 times were the largest group among the respondents (36.30%). For type of business, the major group of respondents was book and printing media business (23.10%). Additionally, more than half of the respondents were small-sized companies (59.10%), were organizations more than 10 years old (57.10%), and were private enterprises with local funding (55.60%). In terms of green policy, the majority of respondents (80.70%) were from companies that did not

have green policy and the majority of respondents (71.30%) were not familiar with any green exhibition guideline.

## **5.2 Green Practice Level of Exhibition Venues (RQ1)**

In this study, green practice levels were categorized into three categories; exhibition production, communication and public relations, and souvenirs distribution.

### **5.2.1 Green Practice Level of Exhibition Venues Regarding Exhibition Production**

According to TCEB's Green Exhibition Guidelines (Thailand Convention and Exhibition Bureau, 2009a), the exhibition venues implemented green exhibition guidelines in such a way as to eliminate, reduce, or recycle waste. Those guidelines focus on three main activities; valuable resource usage, waste and pollution reduction, and chemical reduction. However, based on the results of this study, the mean score of green practice level of exhibition venues on exhibition production showed a slightly difference among each guideline.

The study revealed that the highest mean score guideline was encouraging exhibitors to select reused materials from previous exhibitions offered by the venues, followed by informing exhibitors in advance about their waste reduction policy. Moreover, this study also found that supporting exhibitors to reduce the volume of foam, plastic, and paper usage for booth decorations and display materials; preparing waste bins categorized by paper, plastic bottles, glass, and cans for recycling garbage; and guiding exhibitors on how they could reduce waste were included in the top five highest mean score guidelines as well.

The results of this study was supported by IMEX Research (2009) which structured an assessment of how MICE organizers have introduced and ranked environmentally-aware strategies to their events. The research found that a recycled conference material was the number one green practice applied by organizers. Apart from that, the research also found that disposable place settings were incorporated in their event packages. Accordingly, American Institution for Conservation, or AIC (2009) established the Green Task Force to evaluate US conservators' current green

practices in museums and private businesses. The highest ranked was recycling (over 87%), including active redistribution of equipment and supplies within and outside institutions.

It can be noticed that the exhibition venues strongly implemented the green exhibition guidelines such as recycling, which is somewhat cost driven as waste reduction and saving money go hand in hand (American Institution for Conservation, 2009). By considering the results of this study, the implementation of top five green exhibition guidelines regarding exhibition production could help the exhibition venues save money relative to the cost of operation, in addition to saving the environment. As mentioned by several scholars, it is not only an environmental benefit that is received from implementing green concept, but it is about economic benefits also (Convention Industry Council, 2004; Maple, 2007; Obritzhauser, 2011; Thailand Convention and Exhibition Bureau, 2009a).

On the other hand, this study indicated that the lowest mean score of green practice level regarding exhibition production implemented by exhibition venues was guideline that instructed exhibitors on how they could reduce chemical usage. Moreover, the study also found that informing exhibitors in advance regarding their chemical usage reduction policy; encouraging exhibitors to separate waste; informing exhibitors in advance regarding their energy consumption reduction policy; and encouraging exhibitors to reduce electricity use in the booths were included in the five lowest mean scores of green practice level of exhibition venues in the exhibition production category.

It can be seen that the guidelines in the five lowest mean scores were related to chemical usage and energy consumption. Therefore, this implied that the exhibition venues focused more on waste reduction and efficient resource usage than reducing chemical usage and energy consumption when they produced the exhibitions.

### **5.2.2 Green Practice Level of Exhibition Venues Regarding Communication and Public Relations**

The results of this study showed a slight difference regarding green practice level of exhibition venues in the communication and public relations category, where the highest mean score is 4.96 and the lowest mean score is 4.42. The study found that

providing relevant information for exhibitions via exhibition's website and/or e-mails was the highest ranked guideline of green practice level of exhibition venues regarding communication and public relations, while encouraging exhibitors to reduce paper usage such as handbills and brochures as media was the lowest ranked in this category.

Further grouping the green guidelines in this category by high and low mean score, the green guidelines consisting of promoting the exhibition through the use of exhibition's website, emails, and/or sms on mobile phone; providing a place to collect any unwanted printed materials from visitors upon exiting; supporting exhibitors to promote the display booths through the use of company's website, emails, and/or sms on mobile phone; and supporting exhibitors to provide relevant information regarding the display booth via company's website and/or emails were grouped in the highest mean scores of green practice level of exhibition venues regarding communication and public relations. Whereas, the green guidelines including supporting exhibitors to use the LCD screens and/or electronic sound distribution systems of the venue as a medium for public announcements; encouraging exhibitors to print double-sided handbills and brochures; encouraging exhibitors to use recycled paper; and offering electronic registration via exhibition's website were grouped in the lowest mean scores of green practice level of exhibition venues in this category.

This result agrees with that of the industry study developed by EXPO Magazine, the Philadelphia Convention & Visitors Bureau, and the Pennsylvania Convention Center Authority (2011). The study found that emails and websites are used by nearly every producer and are the number one and two most commonly used mediums for attendance marketing. Nevertheless, according to the study of IMEX Global Data Exchange (2007), the respondents were asked to rank the importance of green initiatives that they felt suppliers attending exhibitions should introduce. The results showed that 'print brochures on recycled paper' was the highest ranked of six green initiatives. The results contrast to this study which found that encouraging exhibitors to use recycled paper by exhibition venues was grouped in the lowest mean score of green practice level of exhibition venues. Furthermore, Park and Boo (2010) also identified that one green practice that the convention hosts can actively influence is the recycling of leaflets because the conventions generate a significant amount of recyclable waste, therefore it creates a major opportunity for this type of green practice.

Considering the green practice level of exhibition venues regarding exhibition production and communication and public relations, it can be seen that the exhibition venues focus more on waste reduction than chemical reduction. Most of the guidelines that are intended to reduce the amount of waste were grouped in the highest mean scores; for instance, encouraging exhibitors to select reused materials from previous exhibitions offered by the venues and promoting the exhibition through the use of exhibition's website, emails, and/or sms on mobile phone. On the other hand, the guidelines that are intended to reduce chemical usage were grouped in the lowest mean scores, such as guiding exhibitors regarding how they can reduce chemical usage, and encouraging exhibitors to print double-sided handbills and brochures or use recycled paper.

This result supports that by the Expo Magazine (2010) which reported that the organizers are working on recycling and reducing waste at their events by 93 and 70 percent respectively where they are required to work closely with the venues, indicating that recycling was the most important green venue practice. Furthermore, the survey of current green practices in US's museums and private businesses conducted by American Institute for Conservation (2009) also revealed that waste reduction by performing recycling activities was the highest ranked in this category.

### **5.2.3 Green Practice Level of Exhibition Venues Regarding Souvenirs**

#### **Distribution**

According to the study results, the highest mean score of green practice level of exhibition venues regarding souvenirs distribution belonged to advocating exhibitors to avoid materials from plants or animals facing extinction. Whereas the lowest mean score of green practice level of exhibition venues in this category belonged to promoting exhibitors to avoid distributing souvenirs. This can imply that it is difficult for exhibition venues to encourage the exhibitors to avoid distributing souvenirs because souvenirs distribution is one of the most successful ways to motivate visitors to visit their booths and remember their companies (Dallmeyer, 2013). However, the exhibition venues attempted to preserve the environment by encouraging the exhibitors to avoid materials from plants or animals facing extinction. This is in parallel with Zein,

Wazner and Meylan (2008) who suggested the hotels not allow events in the hotel to distribute souvenirs made from protected or endangered animal or plant species.

In addition, the exhibition venues also strongly implemented the green guidelines, for instances encouraging exhibitors to select souvenirs made from materials that can be easily found within local area or made from environmental friendly materials and supporting exhibitors to select souvenirs that can be easily manufactured within local area, which were ranked as the second and third ranked of all 10 guidelines. This is in agreement with Chinese University of Hong Kong (CUHK) (2012). Apart from limiting the number of souvenirs, CUHK also provides souvenirs from a local enterprise when they have an event. They put a message on their souvenirs that helps raise awareness about the importance of social responsibility and promote the University's image as a green university. Moreover, as listed in the best environmental practices for hotel industry, Zein, Wazner and Meylan (2008) suggested hotels encourage the events in the hotel to distribute products that are made in ecologically- and socially-friendly ways, if applicable.

Regarding TCEB's green exhibition guideline (Thailand Convention and Exhibition Bureau, 2009a), the second and third ranked of green guidelines implemented by exhibition venues are intended to encourage the exhibitors to have eco-designs for their souvenirs. It is a design with special consideration for the environmental impact of the product during its entire life cycle, including procurement, manufacture, use, and disposal in order to reduce the consumption of materials and energy.

Additionally, the study indicated that the exhibition venues are poor to reduce waste and chemical usage as they weakly encouraged exhibitors to select useful objects as souvenirs or select souvenirs made from recycled materials, if souvenirs are needed. However, Tohmo (2012) stated that the use of recycled materials is one way to produce souvenirs in a sustainable way which encourages consumers to pay attention to fair, ecologically and sustainably produced products. Furthermore, the exhibition venues also weakly supported the exhibitors to minimize packaging for souvenirs or use recycled packaging for souvenirs. This is in contrast with the Hong Kong Jockey Club (2013) that started cutting down on the amount of paper and plastic packaging of their

souvenirs given to race goers because it is great for the environment and has cost benefits as well.

### **5.3 Factors Affecting Green Practice Level of Exhibition Venues (RQ2)**

The exhibitors perceived that the requirement for specifically skilled and qualified persons was the factor that most effected green practice level of exhibition venues, which is in line with the results of ShMILE project. The project reported that the need for specifically skilled and qualified persons related to green policy is one factor affecting the reduction of the energy consumption reduction in hospitality business (ShMILE, 2006). This is further supported by Savage (2007) who stated that effective program implementation is not about having an environmental policy or management in place, but it is about the workforce as well.

The second factor that was perceived by exhibitors was the positive attitude of staff toward environmental preservation. This result is supported by the Green Flag project, which reported that environmental concern and willingness to act are strongly dependent on staff's attitude (Despretz, 2001). Kaufmann, Panni and Orphanidou (2012) also mentioned that environmental concern is a strong attitude towards preserving the environment. They further explained that attitudes were defined as the enduring positive or negative feelings regarding preserving the environment. Additionally, Doody (2010) pointed out that a lack of understanding of the value of adopting a green agenda by hospitality developers, owners and managers will lead to complacent attitude in relation to environmental practices.

The additional significant factors perceived by exhibitors were the enthusiasm of staff, the consistency of implementation by the venues, and the awareness of staff in implementing green policy. Based on the study of Laing and Frost (2010), major factors that cause the green policy to disconnect from actual practice are a lack of awareness to implement green policy and overlooking the importance of consistency of implementation. Paterson and Ward (2011) also stated that the apathy of staff is considered as one major factor affecting the implementation of green policy in event industry. They suggested that providing a practical understanding of some approaches

toward adherence to sustainable principles would reduce the myths and prejudice that exist.

Specifically in hospitality sector, Okazaki, Turn and Flachsbart (2008) interestingly found a poor correlation between the number of employees who participated in waste reduction practices and the effectiveness of waste reduction. This means that waste reduction practices in hotels require education and awareness among all involved, particularly front line employees (Trunk & Kumar, 2005). Therefore, it is necessary to provide a linkage from policy to practical implications in order to bridge or minimize the gap between green policy and practice.

Furthermore, the exhibitors perceived that the high investment cost to implement green policy was the least significant factor affecting green practice level of exhibition venues. However, a previous study reported that there is a resistance by managers to undertake formal environmental management programs because of the investment in time, money and resources in order to comply with standards and procedures (Doody, 2010). Bohdanowicz (2006) further maintained that the financial effectiveness of green practice was listed as the biggest challenge existing in developing and implementing green practices because the functional attributes of green practices are highly related to installation of high cost technologies or systems. Moreover, a prominent feature in public opinion surveys also indicated that environmental concern has been labeled as an extra cost and affordable only in a time of plenty (Brown, 1996).

However, the business perceptions and lobbyists' protests claim that the relative magnitude and scope of the economic costs of environmental regulation or green policy turn out to be far from towering (below 2%) when compared to other business cost factors such as taxes, wages benefits, and interest rates (Meyer, 1994). Claver-Cortes et al. (2007) suggested that the cost of installing new systems might be offset by savings in energy and in waste reduction within a few years. In addition, Meade and Pringle (2001) stated that savings from green practices is continuous and the payback period for the initial investment is approximately two years.

## **5.4 The Relationship between Exhibitors' Demographics and Green Practice Level of Exhibition Venues**

This following section will discuss the relationship between exhibitors' demographics and green practice level of exhibition venues (H1). The results of this study indicate that exhibitors' demographics has significant influence on green practice level of exhibition venues. However, study results suggest that exhibitors' demographics have limited influence on green perceptions. Although some demographic variables in this study show non-significance in green practice level of exhibition venues, certain variables seemed to warrant attentions including exhibition venues, the green policy of exhibitors' companies, the familiarity with green exhibition guideline, types of businesses, and sizes of companies.

**H1:** Exhibitors' demographic has significant influence on green practice level of exhibition venues

### **5.4.1 Exhibition Venues**

The study found that the exhibition venues had statistically significant difference on green practice level regarding communication and public relations and souvenirs distribution. In terms of communication and public relations, the results showed that the respondents from IMPACT had been more greatly supported to provide relevant information regarding their display booth via company's website and/or emails to avoid using handbills and brochures during the exhibition than the respondents from QSNCC. Furthermore, the respondents from IMPACT also had been more greatly encouraged than the respondents from QSNCC to avoid distributing souvenirs; to select souvenirs that can be easily manufactured within local area; and to minimize packaging for souvenirs in souvenirs distribution.

It can be seen that, from exhibitors' perceptions, IMPACT had a greater green practice level than QSNCC in every aspect. This may have been caused by the theme of exhibition organized at each venue. One exhibition at IMPACT had a theme of environmental preservation; therefore the green practicing obviously showed through its production. Furthermore, IMPACT also highlights corporate activity on environmental

protection by launching “IMPACT GO GREEN” on the World Environment Day (Corporate Communications Department, 2013).

#### **5.4.2 The Green Policy of Exhibitors' Companies**

The findings indicated that the green policy of exhibitors' companies had statistically significant differences regarding green practice level of exhibition venues on exhibition production, communication and public relations, and souvenirs distribution categories.

In exhibition production category, the respondents from companies having green policy had greater influence on informing exhibitors in advance about their efficient resource usage policy; guiding exhibitors about how exhibitors can use efficient resources; informing exhibitors in advance about waste reduction policy; guiding exhibitors about how exhibitors can reduce waste; informing exhibitors in advance about their chemical usage reduction policy; guiding exhibitors in the area of how they can reduce chemical usage; informing exhibitors in advance about their reducing energy consumption policy; and guiding exhibitors about how they can reduce energy consumption than the respondents from companies that did not have green policy.

Moreover, the results also showed that the respondents from companies having green policy had greater influence than the respondents from companies did not have green policy regarding supporting exhibitors to reduce volume of foam, plastic, and paper usage for booth decorations and display materials; encouraging exhibitors to select reused materials from previous exhibitions offered by the venues; for instance carpeting, system booths, and name badges; supporting exhibitors to reuse materials from exhibitors' previous exhibitions for booth decorations and display materials; supporting exhibitors to use recycled materials for booth decorations and display materials; encouraging exhibitors to separate waste; and preparing stations for exhibitors to return the name badges after finishing the exhibition in order to reuse them for upcoming exhibitions in the category of exhibition production.

In terms of communication and public relations, the findings indicated that the respondents from companies having green policy had greater influence regarding promoting the exhibition through the use of exhibition's website, emails, and/or SMSs

on mobile phones; providing relevant information for exhibition via exhibition's website and/or emails; supporting exhibitors to provide relevant information regarding their display booth via company's website and/or emails to avoid using handbills and brochures during the exhibition; offering electronic registration via exhibition's website; and providing a place to collect any unwanted printed materials from visitors upon exiting for waste separation before recycling than the respondents from companies did not have green policy.

Regarding the souvenirs distribution category, this study determined that those respondents from companies having green policy had greater influence on promoting exhibitors to avoid distributing souvenirs; supporting exhibitors to select useful objects as souvenirs, if souvenirs are needed; promoting exhibitors to select souvenirs made from environmentally friendly materials; encouraging exhibitors to select souvenirs made from recycled materials; and advocating exhibitors to avoid materials from plants or animals facing extinction.

Furthermore, the findings also indicated that the respondents from companies having green policy had greater influence than the respondents from companies not having green policy on encouraging exhibitors to select souvenirs made from materials that could be easily found within local area; supporting exhibitors to select souvenirs that could be easily manufactures within local area; promoting exhibitors to minimize packaging for souvenirs; advocating exhibitors to use recycled packaging for souvenirs; and providing a place to collect any unwanted souvenirs from visitors upon exiting in order to donate them to organizations in need of the category of souvenirs.

This result is in parallel with the study of American Society of Association Executives (ASAE) in 2010 which found that about half of all professional meeting planners had interest in sustainable meetings, 69% of members had eco-friendly practices in place at their meetings and another 11% planned to do so (Kornegay, 2011).

#### **5.4.3 The Familiarity with Green Exhibition Guideline**

According to the findings, a familiarity with green exhibition guideline made statistically significant difference regarding green practice level of exhibition venues on exhibition production. The respondents who were familiar with green

exhibition guideline had greater influence than the respondents who were not familiar with any green exhibition guideline on informing exhibitors in advance about venues' efficient resource usage policy; guiding exhibitors regarding how they can reduce waste; and informing exhibitors in advance about venues' chemical usage reduction policy.

It can be seen that these guidelines occurred in the pre-staged of exhibitions. Yichen (2010) stated that during pre-staged of exhibition, the venues can communicate and make agreements with exhibitors. It is their opportunity to inform or guide regarding the green exhibition guideline to exhibitors and organizers. The City of Cape Town (2012) also stated that it is important to ensure that the green message is communicated. There is a need to showcase all the greening efforts behind the scenes, and give guidance to the clients/visitors on what they can do to contribute. Exhibition venues should motivate the host/client to have a stand/table dedicated to event greening at the exhibition. It is not only educational, but also promotes event greening principles. Therefore, this finding implies that increasing the awareness of exhibitors regarding green exhibition as well as the familiarity with green exhibition guideline can enhance the green practice level of exhibition venues on exhibition production.

#### **5.4.4 Type of Business**

The study found that type of business had statistically significant difference regarding green practice level of exhibition venues in exhibition production, communication and public relations, and souvenirs distribution categories.

In exhibition production category, type of business had influence on guiding exhibitors regarding how they can use efficient resources; reduce usage of foam, plastic, and paper decorations on stage and/or exhibition area; support exhibitors to reduce volume of foam, plastic, and paper usage for booth decorations and display materials; support exhibitors to reuse materials from previous exhibitions for booth decorations and display materials; support exhibitors to use recycled materials for booth decorations and display materials; encourage exhibitors to reduce electricity use in the booths; prepare waste bins for recycling garbage; and prepare stations for exhibitors to return the name badges after finishing the exhibition in order to reuse them for upcoming exhibitions.

Moreover, the study revealed that type of business had influence green practice level of exhibition venues on offering electronic registration via exhibition's website in communication and public relations category. In addition, the findings indicated that type of business had influence green practice level of exhibition venues regarding several items in souvenir distribution category, including promoting exhibitors to avoid distributing souvenirs; supporting exhibitors to select useful objects as souvenirs; promoting exhibitors to select souvenirs made from environmental friendly materials; encouraging exhibitors to select souvenirs made from recycled materials; encouraging exhibitors to select souvenirs made from materials that can be easily found within local area; supporting exhibitors to select souvenirs that can be easily manufactured within local area; promoting exhibitors to minimize packaging for souvenirs; and advocating exhibitors to use recycled packaging for souvenirs.

It can be seen that different business industries have different impacts on the environment. Therefore, type of business has been used by several studies to control the relationship between corporate environmental issues and corporate performances. This is consistence with Nakao et al. (2007) who found that the relationship between corporate environmental performance and corporate performances depend on the type of industry.

In the exhibition production category, the study revealed that the respondents from a group of textile and jewelry businesses had greater influence on green practice level of exhibition venues than the respondents from a group of book and printing media businesses on reducing usage of foam, plastic, and paper decorations on stage and/or exhibition area; supporting exhibitors to reduce volume of foam, plastic, and paper usage for booth decorations and display materials; and supporting exhibitors to reuse materials from previous exhibitions for booth decorations and display materials. Meanwhile, the respondents from a group of health and beauty businesses had greater influence on green practice level of exhibition venues than the respondents from a group of other businesses on preparing stations for exhibitors to return the name badges after finishing the exhibition in order to reuse them for upcoming exhibitions.

In souvenir distribution category, the study found that the respondents from a group of textile and jewelry businesses had greater influence than book and printing media businesses on green practice level of exhibition venues regarding promoting

exhibitors to avoid distributing souvenirs; encouraging exhibitors to select souvenirs made from recycled materials; encouraging exhibitors to select souvenirs made from materials that can be easily found within local area; supporting exhibitors to select souvenirs that can be easily manufactured within local area; promoting exhibitors to minimize packaging for souvenirs; and advocating exhibitors to use recycled packaging for souvenirs. Furthermore, the results indicated that the respondents from a group of health and beauty businesses had greater influence on green practice level of exhibition venues than the respondents from a group of book and printing media businesses with respect to encouraging exhibitors to select souvenirs made from recycled materials. In addition, the respondents from group of textile and jewelry businesses had greater influence than group of other businesses on promoting exhibitors to minimize packaging for souvenirs.

#### **5.4.5 Size of Company**

The findings indicated that size of company had statistically significant difference regarding green practice level of exhibition venues in exhibition production and communication and public relations categories. The size of company had influence on supporting exhibitors to reduce volume of foam, plastic, and paper usage for booth decorations and display materials in exhibition production category. Moreover, size of company also had influence on encouraging exhibitors to reduce paper usage such as handbills and brochures as media in communication and public relations category.

In exhibition production category, the respondents from large-sized companies had greater influence than the respondents from medium-sized companies regarding supporting exhibitors to reduce volume of foam, plastic, and paper usage for booth decorations and display materials.

In communication and public relations category, the results showed that the respondents from large-sized companies had greater influence on green practice level of exhibition venues than the respondents from medium-sized companies regarding encouraging exhibitors to reduce paper usage such as handbills and brochures as media.

This is consistent with Schmidheiny (1992) who stated that large companies are obviously taking environmentally consciousness action because there has been a shift in the perceived relationship between the environment and business practice.

Within the Hospitality sector, many large hotels tend to adopt environmental strategies by emphasizing the benefits of cost savings, brand image enhancement, as well as employee loyalty and customer retentions (Graci & Dodds, 2008). Merrilees and Marles (2011) further maintained that the large hotels have found that it is less expensive to reduce, reuse, and recycle waste, while small organizations have found it difficult to go green, as the economies of scale do not provide advantages to a small operation.

## **5.5 The Relationship between Exhibitors' Demographics and Factors Affecting Green Practice Level of Exhibition Venues**

This section will discuss the relationship between exhibitors' demographics and factors affecting green practice level of exhibition venues (H2). The results explore the significant influence of exhibitors' demographics discovered in this study on factors affecting green practice level of exhibition venues, including the exhibition venues; the green policy of exhibitors' companies; the familiarity with green exhibition guideline; number of times exhibited; type of business; and size of company.

**H2:** Exhibitors' demographic has significant influence on factors affecting green practice level of exhibition venue

### **5.5.1 Exhibition Venues**

The study revealed that the exhibition venue itself had statistically significant difference on factors affecting green practice level of exhibition venues where the respondents from IMPACT perceived the significance of holding high training cost for specifically skilled and qualified persons; spending a long time training specifically skilled and qualified persons; and the knowledge of staff about environmental preservation more than the respondents from QSNCC. This could be a result of commitment of the IMPACT to educate their staff and customers to adopt green and environmental friendly solutions for their events at the venue in order to preserve the environment (IMPACT Exhibition Management, 2010c).

### **5.5.2 The Green Policy of Exhibitors' Companies**

The findings indicated that green policy of exhibitors' companies had statistically significant difference on factors affecting green practice level of exhibition venues. The respondents from the companies having green policy perceived the significance of the requirement of employing specifically skilled and qualified persons to implement green policy; holding high training costs for specifically skilled and qualified persons; the knowledge of staff about environmental preservations; the positive attitude of staff toward environmental preservations; a clear understanding by staff about green policy before implementation; the awareness of staff to implement green policy; and the enthusiasm of staff to implement green policy more so than did the respondents from companies without having green policy.

According to Singhal (2012), environmental protection is now an integral element of the guidelines used by all the companies surveyed, which suggests that environmental protection objectives are pursued throughout entire companies. The importance of these objectives is also highlighted by high production and manufacturing standards; high innovation efforts in ecological areas; and strong commitment to social responsibility. These companies explain their commitment to environmental protection in terms of the direct business advantages which accrue from reductions in energy costs and waste, attracting attention, conveying a positive corporate image to the media and social institutions as well as motivating employees. Last but not least, the earlier a company begins to perform environmental related activities, such as energy saving programs, the more expertise it is able to acquire in this field. As a result, these companies are able to fall back on a relatively broad base of knowledge which can lead to the generation of further environmentally friendly eco-innovations.

### **5.5.3 The Familiarity with Green Exhibition Guideline**

The study revealed that the familiarity with green exhibition guideline had statistically significant difference on factors affecting green practice level of exhibition venues. The respondents who were familiar with green exhibition guideline perceived the significance of the knowledge of staff about environmental preservations; the positive attitude of staff toward environmental preservations; and the enthusiasm of

staff to implement green policy more so than did the respondents who were not familiar with any green exhibition guideline.

It is understandable that the exhibitors who know about green concept and policy perceived that staff of venue should clearly know about green policy as well. As mentioned by Savage (2007), effective program implementation is not only about having an environmental policy or management in place, but it is also about the workforce.

#### **5.5.4 Number of Times Exhibited**

The findings showed that the number of times exhibited by exhibitors had statistically significant difference on factors affecting green practice level of exhibition venues regarding the items of holding high training cost for specifically skilled persons and spending a long time training specifically skilled persons. The respondents who had exhibited 2-5 times perceived the significance of holding high training costs for specifically skilled persons more so than did the respondents who had exhibited more than 10 times.

It implies that the more exhibitors become involved and experienced in green policy implementation by exhibition venues, the more positively it can influence their perceptions about these implementations (Smith & Perks, 2010).

#### **5.5.5 Type of Business**

The results indicated that type of business had statistically significant difference on factors affecting green practice level of exhibition venues regarding having high investment costs to implement green policy; using large amounts of time to implement green policy; spending a long time training specifically skilled persons; having knowledge about environment preservation; having clear understanding about green policy; and having an awareness to implement green policy.

The study revealed that the respondents from a group of food and beverage businesses perceived the significance of using large amounts of time to implement green policy more so than did the respondents from a group of other businesses. In addition, the study also found that the respondents from a group of food and beverage businesses perceived the significance of spending a long time training specifically

skilled persons and having knowledge about environment preservation more so than did the respondents from a group of book and printing media businesses.

It implies that the green aspect of each business appears to be business-specific. As stated by Smith and Perks (2010), different types of businesses tend to have different perceptions regarding green practicing.

#### **5.5.6 Size of Company**

The study found a statistically significant difference on several factors where the respondents from large-sized companies perceived the significance of using large amounts of time to implement green policy; owning high maintenance costs to implement green policy; holding high training costs for specifically skilled persons; spending a long time training specifically skilled persons; and the enthusiasm of staff to implement green policy more so than did the respondents from medium-sized companies. In addition, the results indicated that the respondents from small-sized companies perceived the significance of owning high maintenance costs to implement green policy more so than did the respondents from medium-sized companies.

In a previous study, Vernon et al. (2003) identified that the environmental improvement in organizations always comes at a cost which affects the owners' decision-making and the need for management to formally collect information regarding to environmental policies and strategies. Therefore, it becomes a distinctive feature and common obstacle in small organizations when it comes to environmental improvement. Tzschentke, Kirk and Lynch (2008) also believed that limited awareness amongst small business owners of their environmental footprint has consistently been identified as a barrier to change. In addition, Smith and Perks (2010) mentioned that small businesses have fewer employees and might not have the potential staff or knowledge regarding how to implement green business practices which can be an important factor affecting green policy implementation. Finally, company size also appears to be an important factor influencing a company's product related innovation effort. While big firms tend to engage in the mass production of environmentally friendly products, smaller firms are more likely to attempt to penetrate small market niches by producing specialized eco-products (Singhal, 2012). Therefore, it is

understandable that exhibitors from different sizes of companies tend to have different perceptions regarding green policy implementation.

## **5.6 The Relationship between Factors Affecting Green Practice Level and Green Practice Level of Exhibition Venues**

In this study, the factors affecting green practice level of exhibition venues are categorized into two groups. The factors in first group are under the responsibility of exhibition venue including the investment costs, time consumed for policy implementation, the maintenance costs, the requirement for specifically skilled and qualified persons, the training costs, time consumed for training, and the consistency of implementation. For the second group, the factors consist of the knowledge about environmental preservation, a positive attitude toward environmental preservation, a clear understanding about green policy, an awareness to implement green policy, and the enthusiasm to implement green policy, which are under the responsibility of staff. Based on the study results, these factors had significance influence on green practice level of exhibition venues regarding exhibition production (H3, H4), communication and public relations (H5, H6), and souvenirs distribution (H7, H8).

### **5.6.1 The Relationship between Factors Affecting Green Practice Level and Green Practice Level of Exhibition Venues Regarding Exhibition Production**

**H3:** Exhibition venue has significant influence on green practice level regarding exhibition production

The findings indicated that there is a significant positive relationship between exhibition venue and green practice level regarding exhibition production.

Investment in environmental practices may be the result of a large set of factors and motivations, and these motivations may be related to cost reductions or revenue increases and eventually leads to increasing business performances (Ambec & Lanoie, 2008). Porter and Van der Linde (1995) maintained that improving a company's environmental performance could lead to better economic or financial performance, and

not necessarily to an increase in costs. Antonietti and Marzucchi (2013) investigated whether green investment strategies, for instance investments in machinery and equipment aimed at reducing the environmental impact of production, influence firms' productivity and international competitiveness. They found that investing in end-of-pipe technology does not have any productivity effects. However, an environmental investment strategy that integrates environmental protection with reduction in the use of raw materials allows firms to increase the level of production efficiency. Ha (2013) further maintained that green policies could improve the environmental adaptability and impacts of economies at relatively low overall cost and provide signals for continuing investment in green innovation. Finally, organizational policy and skills development can enable green investment to be translated into immediate and long-term benefits, including cost savings, market opportunities and environmental benefits.

**H4:** Staff has significant influence on green practice level regarding exhibition production

This study further found a significant positive relationship between staff and green practice level regarding exhibition production.

There are various researchers who support the concept that human resource practices result in providing positive contributions to organizational performance and competitive advantages. Green Flag project (Despretz, 2001) reported that environmental concern and willingness to act are strongly dependent on employee's attitude and knowledge. The project found that if employees are interested in ecological matters, those employees might perform more effectively in implementing all types of environmentally friendly measures than employees who are not interested in environmental protection. Moreover, Hasan and Kazalaukas (2009) mentioned that employees may have positive attitudes, but these attitudes may not carry through to positive behaviors because of a lack of knowledge related to environmental preservation. Therefore, staff education by organizations, dissemination, promotion, green labeling, pilot projects and training courses could be initiated for green performance such as efficient resource use and management of organizations (Trung & Kumar, 2005).

Based on Expo Magazine (2010), a trained staff in sustainable practices showed a strongly response (40%) as important green venues practices because it helps to make sure a venue's green programs are actually acted upon. Failte Ireland (2012) maintained that it would be much more difficult to liaise and deliver a green event to a client if your own business does not adhere to the best environment practices. It is vital that staff are also part of the delivery because they are the people that clients will interact with and will ask about sustainable practices. If staff cannot respond accordingly, or carry out the procedures required, the clients will not receive the service they have requested. Therefore, greening the business is also about developing the knowledge and skills of staff and enabling all staff to communicate on the same level as the clients. This is also maintained by Hiom (2010); all staff involved in work for exhibits must be made aware of the environmental policy of the organization and must be able to communicate the environmental policy effectively and are, therefore, accountable for the successful carrying out of environmental efforts for exhibitions.

However, it is not enough to just comply with green practices; such practices should be embraced and supported by employees within the company. Therefore, Kim and Choi (2013) suggested that in order to improve and implement green practices effectively, companies should take their employees into consideration when they embrace green practices. In other words, special positions within companies need to be created in the area of environmental management in order to be a true champion in this field (Enz & Signaw, 1999).

### **5.6.2 The Relationship between Factors Affecting Green Practice Level and Green Practice Level of Exhibition Venues Regarding Communication and Public Relations**

According to Convention Industry Council (2004) and Thailand Convention and Exhibition Bureau (2009a), green exhibition guidelines related to communication and public relations intend to reduce the amount of paper and waste by encouraging the exhibitors to distribute their information and promotions via electronic channel and use Information Technology instead of distributing brochures and handbills. For example, the use of website or emails to promote the exhibition events and provide relevant information regarding exhibition, the use of electronic registration, and the use of LCD

screens or electronic sound distribution system for public announcements during the exhibition events. Therefore, IT has become a part of business and plays an important role in today's business world (Ping, 2012).

Green IT is the information technology initiative and programs that address environmental sustainability (Siegler & Gaughan, 2008). Moreover, green IT can be known as the coverage of environmental sustainability dimensions, the economics of energy efficiency, and the total cost of ownership, which include the cost of disposal and recycling. Thus, green IT intends to accomplish economic feasibility and enhanced system performance and use, while retaining the social and ethical responsibilities (Ping, 2012).

**H5:** Exhibition venue has significant influence on green practice level regarding communication and public relations

According to the results of this study, there is a significant positive relationship between exhibition venue and green practice level regarding communication and public relations. As stated by Hart (1997) and Molla (2009), green IT is an organization's ability to systematically apply environmental sustainability criteria (such as pollution prevention, product stewardship, use of clean technologies) to the design, production, sourcing, use and disposal of the IT technical infrastructure as well as within the human and managerial components of the IT infrastructure. Many businesses have discovered that Green IT initiatives offer costs saving benefits while reforming the organization, meeting stakeholder demands and complying with laws and regulations. The study of Info-Tech research group (2013) found that businesses who complete Green IT initiatives realize significant cost savings alongside superior environmental performance.

**H6:** Staff has significant influence on green practice level regarding communication and public relations

This study also reported a significant positive relationship between staff and green practice level regarding communication and public relations. Within sustainability perspective, it is arguable that the integration of IT technology and human resources is critical in enabling firms to develop sustainability capabilities (Dao, Langella, & Carbo,

2011). Aral and Weill (2007) further explained that the combination of IT technology resources and human resources confers firms with unique capabilities that help them increase efficiency, profitability, innovation and gain sustained competitive advantage. Moreover, the study of Nejadirani, Rasouli and Behraves (2011) showed that using IT in Mashhad Municipality Department of Parks has increased the best use of human and informational resources. In fact, we can say that using IT has decreased the expenses and increased efficiency in organization.

### **5.6.3 The Relationship between Factors Affecting Green Practice Level and Green Practice Level of Exhibition Venues Regarding Souvenirs Distribution**

According to Convention Industry Council (2004) and Thailand Convention and Exhibition Bureau (2009a), green exhibition guidelines related to souvenirs distribution intend to reduce waste and chemical usage by selecting souvenirs made from recycle materials, use manufactured materials easily found within the region, and keep packaging materials for souvenirs to a minimum. This is an effort to introduce the concepts of eco-design and green procurement in order to improve the environment preservation of exhibition venues.

**H7:** Exhibition venue has significant influence on green practice level regarding souvenirs distribution

According to the findings, there is a significant positive relationship between exhibition venue and green practice level regarding souvenirs distribution. This is supported by Zhu and Sarkis (2004) who studied the relationships between operational practices and performance among early adopters of green supply chain management practices in Chinese manufacturing enterprises. The results indicated that the organization's implementation of eco-design practices, including internal environmental management; investment; and restoration of the ecological design or environmental design have positive relations with the organization's environmental performance.

**H8:** Staff has significant influence on green practice level regarding souvenirs distribution

This study further explored a significant positive relationship between staff and green practice level regarding souvenirs distribution, which agrees with the study results of green supply chain and eco-design in electronic industry (Singhal, 2012). Singhal (2012) stated that a further drive to eco-innovation is generated by the personal involvement and commitment of individual employees, particularly those in the Research and Development department who often ensure that project innovations are implemented, despite the uncertainty and risk attached to such activities. Additionally, the corporate culture and attitudes towards environment-related topics also force eco-innovation of organizations.

## CHAPTER VI

### CONCLUSIONS AND RECOMMENDATIONS

This chapter covers some of the important findings of this study by describing the two major outcomes that were achieved. In addition, the chapter further highlights the implications of the study. Finally, the limitations of the study and the recommendations for future research in the field of environmental management, particularly green exhibitions are also explained.

#### 6.1 Conclusions

This study achieved both objectives that were intended to (1) examine the green practice level of exhibition venues in Thailand and (2) identify factors affecting green practice level of exhibition venues in Thailand that apply the green concept into their operations and management policies. The Queen Sirikit National Convention Center (QSNCC) and IMPACT Arena, Convention and Exhibition Center (IMPACT) were studied because they are labeled as two leading green exhibition venues in Thailand by Thailand Convention and Exhibition Bureau (TCEB).

This study employed a quantitative approach and used the questionnaire as an instrument for conducting survey. The questionnaire was developed from Thailand Convention and Exhibition Bureau or TCEB's Green Exhibition Guideline by using a seven-level Likert scale from 1 (strongly disagree) to 7 (strongly agree) as a measurement. The questionnaires were distributed to exhibitors from four exhibitions; two exhibitions from each venue were represented. Finally, 394 questionnaires were used in this study.

**Objective 1:** To examine the green practice level of exhibition venues in Thailand regarding TCEB's Green Exhibition Guideline

In this study, the green practice levels of exhibition venues were categorized into three categories; exhibition production, communication and public relations, and

souvenirs distribution. The exhibitors' perceptions revealed that the top five green practice levels of exhibition production were encouraging exhibitors to select reused materials from previous exhibitions offered by the venue, for instance carpeting, system booths, and name badges; informing exhibitors in advance about venue's waste reduction policy; supporting exhibitors to reduce volume of foam, plastic, and paper usage for booth decorations and display materials; preparing waste bins for recycling garbage categorized by paper, plastic bottles, glass, and cans; and guiding exhibitors with respect to how they could reduce waste, respectively. The exhibitors perceived that guiding exhibitors regarding how they could reduce chemical usage was the lowest green practice level of exhibition production.

With respect to communication and public relations, the study demonstrated that the top five green practice levels included providing relevant information for exhibition via exhibition's website and/or emails; promoting the exhibition through the use of exhibition's website, emails, and/or SMSs on mobile phones; providing a place to collect any unwanted printed materials from visitors upon exiting for waste separation before recycling; supporting exhibitors to promote their display booth through the use of company's website, emails, and/or SMSs on mobile phones; and supporting exhibitors to provide relevant information regarding display booth via company's website and/or emails to avoid using handbills and brochures during the exhibition, respectively. The lowest green practice level of communication and public relations from exhibitors' perspective went to encouraging exhibitors to reduce paper usage such as handbills and brochures as media.

Moreover, the findings indicated that the top five green practice levels of souvenirs distribution were advocating exhibitors to avoid materials from plants or animals facing extinction; encouraging exhibitors to select souvenirs made from materials that can be easily found within local area; supporting exhibitors to select souvenirs that could be easily manufactured within local area; promoting exhibitors to select souvenirs made from environmental friendly materials; and providing a place to collect any unwanted souvenirs from visitors upon exiting in order to donate them to organizations in need, respectively. Promoting exhibitors to avoid distributing souvenirs was perceived by exhibitors as the lowest green practice level in this category.

**Objective 2:** To identify the factors affecting green practice level of exhibition venues in Thailand

The questions in this part were developed from previous studies which found that requiring specifically skilled and qualified persons to implement green policy; a positive attitude of staff toward environmental preservation; the enthusiasm of staff to implement green policy; the consistency of venue to implement green policy; and an awareness of staff to implement green policy were the top five factors, respectively, that most effect the green practice level of exhibition venues from exhibitors' perceptions. The exhibitors perceived that a high investment cost to implement green policy had the least affect on green practice level of exhibition venues in Thailand.

Furthermore, this study also explored the relationship between exhibitors' demographics and green practice level of exhibition venues as well as the relationship between exhibitors' demographics and factors affecting green practice level of exhibition venues. The study results suggested that although some demographic variables in this study show non-significance in green practice level of exhibition venues and factors affecting green practice level of exhibition venues, certain variables seemed to warrant attention. Those exhibitors' demographics included the exhibition venues, the green policy of exhibitors' companies, the familiarity with green exhibition guideline, number of times exhibited, type of business, and size of company. Finally, this study found that exhibition venue and staff have a positive relationship on green practice level of exhibition venues, and the staff have a greater influence on green practice level than the venues.

## **6.2 Implications of This Study**

### **6.2.1 Academic Implications**

This survey performed among exhibitors cast some light on the perception of green practice level of exhibition venues in Thailand and factors affecting green practice level of exhibition venues. The findings of this study contribute to new knowledge regarding the current state of environmental management in Thailand's

exhibition industry. These include the current level of green practicing of exhibition venues with respect to TCEB's Green Exhibition Guideline and the factors that affect the exhibition venues implementing the green policy. It should be viewed as a preliminary step to examine the performance of exhibition venues in Thailand against the environmental commitments and an understanding of the factors affecting green performance. Therefore, it is expected that this study can be used as an empirical study where the contribution of this study can fulfill the current literatures related to the exhibition industry, particularly in the aspect of green concept because there were few previous researchers studies in this area. Additionally, it may be useful for future researchers who have similar interest in the field of environmental management.

Based on the findings, the green practicing of exhibition venues in exhibition production, communication and public relations, and souvenirs distribution mostly focus on waste reduction and efficient resource usage policies. Meanwhile, the exhibition venues had poor green practicing regarding chemical usage and energy consumption policies. Therefore, the venues should pay more attention to the areas of chemical usage and energy consumption when they produce the exhibitions in order to enhance the green practice level of the venues and achieve the goal of environmental commitment. For examples, in exhibition production process, the venues should introduce the chemical usage reduction and energy consumption reduction policies to exhibitors before starting the exhibitions and guide the exhibitors on how to reduce chemical usage and energy consumption such as reducing electricity used in the booth or separating waste before disposal.

In communication and public relations process, it is good that the exhibition venues had a strong practice in using information technology such as websites and emails as media to promote the information regarding exhibitions as well as information regarding exhibitors to customers and visitors before the events. However, the exhibition venues should focus more on the methods of communication during the events because the venues exercised poor practice regarding encouraging exhibitors to reduce paper usage such as handbills and brochures as media. The venues should encourage the exhibitors to use LCD screens or electronic sound distribution system of the venue as a medium for public announcements. If handbills and/or brochures are needed by exhibitors, the venues should encourage them to use recycled paper and print

double-sided materials. Furthermore, because the exhibitors cannot avoid distributing souvenirs, the exhibition venues should encourage the exhibitors to select useful objects as souvenirs in order to reduce the amount of waste from unused objects. Apart from encouraging exhibitors to avoid materials from plants or animals facing extinction and promote the eco-design of souvenirs, the venues should encourage exhibitors to select souvenirs made from recycled materials in order to reduce chemical usage as well.

According to the results of this study, the exhibition venues should pay attention to human resources because this study indicated that the requirement of specifically skilled and qualified persons was the factor that most effected green practice level of exhibition venues, followed by the positive attitude of staff toward environmental preservation, the enthusiasm of staff, and the awareness of staff to implement green policy, respectively. Additionally, this study also found a positive relationship between staff and green practice level of exhibition production, communication and public relations, and souvenirs distribution. This means that the environmental improvement of organizations cannot act without the support of their staff. Therefore, the exhibition venues should include their staff in organizational policymaking and commitment to environmental preservation; for instance in staff employment, training, evaluation and promotion.

This study also found a positive relationship between green investment of exhibition venues and green practice level of exhibition production, communication and public relations, and souvenirs distribution. Therefore, it could imply that the investment in environmental practices that intend to reduce the environmental impact of production could influence the level of organizational environmental performances. Even though the green investment will be perceived as initial costs of organization, it can be translated into immediate and long-term benefits including strengthening reputation; improving employee morale; leading to cost savings; and benefiting the environment. Therefore, the exhibition venues should pay attention to green investment and set it as organizational policy and commitment, for instance green IT investment, green procurement, and eco-design.

Importantly, this study established a new measurement scale to evaluate the practice level of exhibition venues with respect to TCEB's Green Exhibition Guideline, which is a guideline for the venues to conduct the exhibitions in environmental friendly

ways (Thailand Convention and Exhibition Bureau, 2009a). Based on the guideline, this scale was divided into three dimensions including exhibition production, communication and public relations, and souvenirs distribution. The exhibition venues can use this scale as a basis to develop the internal evaluation tool and evaluate themselves regarding their green initiatives and commitment in order to improve and strengthen the green practice level of the organizations. Moreover, Thailand Convention and Exhibition Bureau can use this scale as a basis to develop a set of key performance indicators (KPI) for Thailand's exhibition industry in order to improve the standard of Thai exhibition players and strengthen the brand image of Thailand's exhibition industry as well.

### **6.2.2 Managerial Implications**

This study can be used as basic tool for venue managers to evaluate their performances regarding green initiatives commitment. The venue managers can interpret and analyze the results of this study to determine which strength and weakness points should be maintained or improved. The exhibition venues had focused on some dimension of green initiatives such as waste reduction. From that point, the improvement directions for venue operations to fill the gap between green policy and practice can be suggested. Consequently, venue managers can use these findings to develop their management strategies in order to enhance their performances and strengthen their image because a number of practical recommendations to improve the performances of exhibition venues on green practicing may be offered.

The findings reported that the exhibitors from companies with green policy and exhibitors who were familiar with green exhibition guidelines were more concerned with green exhibitions. Therefore, the venues should encourage the exhibitors from companies without green policy and exhibitors who are unfamiliar with green exhibition guidelines to realize the importance of green exhibitions. The venues can collaborate with Thailand Convention and Exhibition Bureau to promote the importance of green concept and provide education regarding green exhibitions and green exhibition guidelines to exhibitors. The green concept can help exhibitors to enhance their corporate image regarding social and environmental responsibility and benefit long-term operational costs as well. Moreover, this can indirectly force the exhibition venues

to improve themselves according to green practicing to meet the needs of exhibitors as well.

In addition, the study found that the exhibitors from book and printing media businesses were less concerned with green exhibitions than exhibitors from other businesses such as textile and jewelry businesses and health and beauty businesses, hence the exhibition venues should pay special attention when conducting exhibitions regarding book and printing media. Based on the findings, the venues should pay special attention to exhibition production and souvenirs distribution. For examples, the venues should encourage the exhibitors to reduce volume of foam, plastic, and paper usage as well as encourage the exhibitors to reuse materials from previous exhibitions for booth decorations and display materials. Moreover, the venues should encourage the exhibitors to avoid distributing souvenirs. But, if souvenirs are needed, the venues should encourage the exhibitors to select souvenirs made from recycled materials or made from materials that are easily found and manufactured within local area, and encourage the exhibitors to minimize packaging or use recycled packaging for souvenirs.

In addition, the exhibition venues should educate the exhibitors from small-sized companies about the benefits of using IT for communication and public relations activities and encourage the exhibitors to distribute their information via website, emails, LCD screens or sound system provided by the venues rather than distributing handbills and brochures. Apart from reducing the amount of waste from leftover materials, it can reduce the long-term costs of exhibitors in producing those handbills and brochures as well.

However, all of these recommendations can be accomplished through cooperation between the exhibition venues and event organizers if the exhibitions are not organized by the venues. In this case, the organizers, as a third party between the venues and exhibitors, would play a part in the success of green exhibitions. Therefore, the exhibition venues should clearly state the green exhibition policy of the venues to the organizers in the pre-stage of exhibitions and monitor how the organizers implement those policies with exhibitors during the exhibitions as well. After the exhibitions, the venues should discuss the results of green policy implementation with the organizers in order to indicate how serious the venues are regarding green exhibitions.

The results also indicated that venues' staff have more influence on green practice level of exhibition venues than the venues themselves. Therefore, the venues or venue managers should give priority to staff development in order to enhance the quality and ability of staff regarding implementing green policy. A number of practical recommendations to improve their performances may be offered. First, venue managers should communicate details of green policies and practices to their staff. It may be possible that exhibition venues try to implement green policies and practices, but staff may not be aware of them or their positive outcomes. In addition, managers should communicate the benefits and outcomes of green practices to their staff as well. This may encourage their active participation in green practices.

Second, venue managers should not make staff feel that green practices are just an organization-level policy. In other words, the managers should do their best to facilitate staff's participation in green practices and make them familiar with those practices. For instance, recycle bins should be visible and easy to access and paper needs to be properly sorted for reuse.

Third, exhibition venues should offer job-specific environmental training programs for staff. This can enhance the knowledge of staff as well as reinforce and boost green participation by staff who feel left out of the green initiatives. In addition, green training may motivate and inspire staff who are unwilling to embrace green practices as well. However, green training can be arranged as organizational training for general knowledge regarding green practices and departmental training for job-specific knowledge.

Last but not least, venue managers should develop an internal system to measure the green performances of exhibition venues by staff, organizers, exhibitors, and visitors. In this manner, the venues can improve their green practice level. At the same time, regular assessment by staff will create positive green cultures and show that green practices are not just a short-term campaign to obtain more business, but they are organizations' permanent business policy.

### **6.3 Limitations**

This study was conducted under several limitations including the length of time for conducting survey which affected the number of exhibition venues used in this study. Firstly, the author had to ask for permission from event organizers to gain access to the exhibitions and the author was denied by the organizers several times. Finally, there were four exhibitions from two exhibition venues which acknowledged the request. However, this study proposed to study six exhibitions from three exhibition venues in Thailand. As a result, the sample may have been limited in the type of exhibition as well.

Furthermore, this study also has a limitation in number of previous studies related to this field that were used to discuss and support the study results. This is because green exhibitions are new concept in the field of research, therefore some parts of this study may not be compared or discussed relevant to other studies.

### **6.4 Recommendations**

This study is seen as a beginning of the exploration of Thailand green exhibitions, particularly the green practicing of exhibition venues. Therefore, there is still a much wider scope available to carry out research on environmental issues because there are many areas that could be explored.

Regarding the limitations of this study relative to the number of exhibition venues that were used as sample, it is recommended that future researchers should consider a larger number of venues, both small and large sizes, in order to increase the reliability and validity of the findings. Moreover, the comparison of green practice levels between large and small venue should be conducted further. A study that focuses on identifying the understanding of small exhibition venues' relationship with environment and reconciles what small venues practice with respect to the growing pressure from stakeholders and customers to improve their environmental efforts would be very useful. In addition, this study mainly focused on three areas of TCEB's Green Exhibition Guideline, therefore a study of other areas in the guideline or which uses another guideline such as Convention Industry Council's Green Exhibition Best Practices as a basis for measurement also is recommended.

Furthermore, this study was mainly quantitative in nature and collected data by surveying method whereby the results are purely descriptive analysis. Therefore, it is further suggested that a similar study could be a qualitative approach which may be able to generate in-depth findings. Additionally, the further study could be conducted as longitudinal design measured repeatedly on the same variables in order to examine the exhibition venue's changing responses over time.

This study mainly focused on the relationship between the exhibition venues and exhibitors, but the event organizers, as a third party between the venues and exhibitors, play an important role in organizing the exhibitions as well. Hence, the relationship between the venues and organizers, or between organizers and exhibitors, or among the venues, organizers, and exhibitors could be explored further in order to gain a better understanding of the way that venues transmit green policies to exhibitors. However, apart from exhibition venues, organizers, and exhibitors, there are other players in exhibition industry that get involved in organizing the exhibitions. Each player has different roles and duties that might affect the green level of the exhibitions such as hotel providers, transportation providers, food and beverage providers, other services providers and suppliers, and visitors. Therefore, a holistic study of exhibition industry in order to determine the flow of green policy transmission and in order to discover the obstacles of green policy implementation within the supply chain could be conducted.

This study provided some interesting results generated from exhibitors' perceptions toward green practice level of exhibition venues such as factors affecting green practice level of the venues. The researchers may explore other stakeholders' perceptions such as customers, organizers, visitors and even the exhibition venues themselves. For examples, the demand of customers and visitors for green exhibitions; green awareness of visitors in visiting the exhibitions; the awareness of event organizers, as a medium for venues and customers, in choosing the green venues; and the awareness of event organizers, as a medium for venues and exhibitors, in transmitting green policy of the venues to exhibitors. In addition, a study of factors for the going green of the venues such as the requirement for holding mega events or international exhibitions and a study of how the venues monitor their green policies in pre-, during, and post-events are also recommended. Moreover, a study of green

practice level of other players in exhibition industry including the organizers, exhibitors, and visitors should be conducted as well.



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## APPENDIX A

### DOCUMENTARY PROOF OF THE COMMITTEE FOR RESEARCH ETHICS



COA.No.	2013/201.0807
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#### Documentary Proof of The Committee for Research Ethics (Social Sciences)

Title of Project:	Green Practice Level of Exhibition Venues from Exhibitors' Perspectives
Principal Investigator:	Miss Nantaporn Minkwan
Name of Institution:	International College , Mahidol University
Approval includes:	1) MU-SSIRB Submission form version received date 13 June 2013 2) Participant Information sheet version date 13 June 2013 3) Informed Consent form version date 13 June 2013 4) Questionnaire Guideline version received date 6 June 2013
The Committee for Research Ethics (Social Sciences) is in full compliance with International Guidelines of Human Research Protection such as Declaration of Helsinki, The Belmont Report, CIOMS Guidelines and the International Conference on Harmonization in Good Clinical Practice (ICH-GCP)	

Date of Approval:	8 July 2013
Date of Expiration:	7 July 2014

Signature of Chairman:.....  
*(Signature)*  
(Emeritus Professor Santhat Sermisri)

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Signature of Head of the Institute:.....  
*(Signature)*  
(Assoc.Prof.Dr.Wariya Chinwanho)  
 Dean of Faculty of Social Sciences and Humanities

## APPENDIX B

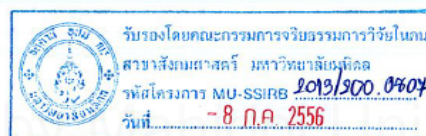
### PARTICIPANT INFORMATION SHEET

**เอกสารชี้แจงผู้เข้าร่วมการวิจัย (สำหรับการตอบแบบสอบถาม)**  
(Participant Information Sheet)

คำชี้แจง	
ในเอกสารนี้อาจมีข้อความที่ท่านอ่านแล้วยังไม่เข้าใจ โปรดสอบถามหัวหน้าโครงการวิจัย หรือผู้แทนที่ช่วยอธิบายจนกว่าจะเข้าใจดี ท่านจะได้รับเอกสารนี้ 1 ฉบับ นำกลับไปอ่านที่บ้านเพื่อปรึกษาหารือกับญาติพี่น้อง เพื่อนสนิทของท่าน หรือผู้อื่นที่ท่านต้องการปรึกษา เพื่อช่วยในการตัดสินใจเข้าร่วมการวิจัย	
ชื่อโครงการ	ระดับการดำเนินการตามนโยบายรักษาสิ่งแวดล้อมของศูนย์แสดงสินค้าจากมุมมองของผู้จัดแสดงสินค้า
ชื่อผู้วิจัย	นางสาวนันทพร มิ่งขวัญ
สถานที่ทำงาน	ศูนย์บัณฑิตศึกษา วิทยาลัยนานาชาติ มหาวิทยาลัยมหิดล เลขที่ 175 อาคารสาทร ซิตี ทาวเวอร์ ชั้น 12 ถ.สาทรใต้ หุ้่งมาแถม เขตสาทร กรุงเทพฯ 10120
หมายเลขโทรศัพท์	08 4002 6502
สถานที่วิจัย	ศูนย์การประชุมแห่งชาติสิริกิติ์, ศูนย์แสดงสินค้าและการประชุม อิมแพ็ค เมืองทองธานี, และ ศูนย์นิทรรศการและการประชุมไบเทค
ผู้ให้ทุน	

ข้อมูลโครงการวิจัยโดยย่อ	
โครงการวิจัยนี้ทำขึ้นเพื่อประเมินระดับการดำเนินการตามนโยบายรักษาสิ่งแวดล้อมของศูนย์แสดงสินค้าในการจัดงานแสดงสินค้าจากมุมมองของผู้จัดแสดงสินค้าและระบุปัจจัยที่มีผลกระทบต่อระดับการดำเนินการตามนโยบายรักษาสิ่งแวดล้อมของศูนย์แสดงสินค้า	
<p>ประโยชน์ที่คาดว่าจะได้รับจากการวิจัยนี้คือ ทำให้ทราบถึงสถานการณ์ปัจจุบันของการจัดงานแสดงสินค้าภายใต้แนวคิดรักษาสิ่งแวดล้อมในประเทศไทย โดยผลจากการวิจัยจะช่วยให้เห็นถึงจุดแข็ง จุดอ่อน และอุปสรรคของศูนย์แสดงสินค้าในการดำเนินการตามนโยบายรักษาสิ่งแวดล้อม จากจุดนี้ ศูนย์แสดงสินค้านี้รวมถึงหน่วยงานที่เกี่ยวข้องทั้งภาครัฐและภาคเอกชนสามารถใช้เป็นแนวทางในการพัฒนากลยุทธ์ในการจัดงานแสดงสินค้าเพื่อให้บรรลุวัตถุประสงค์ของการจัดงานแสดงสินค้าภายใต้แนวคิดรักษาสิ่งแวดล้อม นอกจากนี้จะเป็นการช่วยรักษาสิ่งแวดล้อมซึ่งเป็นปัญหาใหญ่ในปัจจุบัน ยังสามารถช่วยส่งเสริมภาพลักษณ์ของศูนย์แสดงสินค้า รวมถึงภาพลักษณ์ของอุตสาหกรรมการจัดแสดงสินค้าของประเทศไทยในฐานะประเทศที่ให้ความสำคัญกับการรักษาสิ่งแวดล้อมอย่างแท้จริง</p>	

ท่านได้รับเชิญให้เข้าร่วมการวิจัยนี้เพราะ	ท่านเป็นผู้จัดแสดงสินค้าในศูนย์การประชุมแห่งชาติสิริกิติ์, ศูนย์แสดงสินค้าและการประชุม อิมแพ็ค เมืองทองธานี หรือศูนย์นิทรรศการและการประชุมไบเทค
จำนวนผู้เข้าร่วมการวิจัยทั้งสิ้น	420 คน โดยมาจากศูนย์การประชุมแห่งชาติสิริกิติ์ จำนวน 140 คน, ศูนย์แสดงสินค้าและการประชุม อิมแพ็ค เมืองทองธานี จำนวน 140 คน, และ ศูนย์นิทรรศการและการประชุมไบเทค จำนวน 140 คน
ระยะเวลาที่จะทำวิจัยทั้งสิ้น	10 เดือน (เดือนมกราคม 2556 ถึงเดือนตุลาคม 2556)

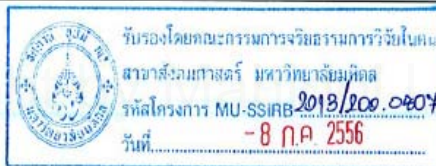


<b>หากท่านตัดสินใจเข้าร่วมการวิจัยแล้ว จะมีขั้นตอนการวิจัยดังต่อไปนี้</b>
<p>ผู้วิจัยจะขอให้ท่านตอบแบบสอบถามในประเด็นเกี่ยวกับ “ระดับการดำเนินการตาม โยบายรักษาสิ่งแวดล้อมของ ศูนย์แสดงสินค้า และปัจจัยที่มีผลกระทบต่อระดับการดำเนินการตาม โยบายรักษาสิ่งแวดล้อมของศูนย์แสดงสินค้า” โดยใช้เวลา ในการตอบแบบสอบถามประมาณ 20 นาที ซึ่งคำถามมีทั้งหมด 62 ข้อ แบ่งคำถามออกเป็น 3 ส่วน ดังนี้</p> <p>ส่วนที่ 1 ข้อมูลของผู้จัดแสดงสินค้า จำนวน 10 ข้อ</p> <p>ส่วนที่ 2 แบบสอบถามระดับการดำเนินการตาม โยบายรักษาสิ่งแวดล้อมของศูนย์แสดงสินค้า จำนวน 40 ข้อ</p> <p>ส่วนที่ 3 แบบสอบถามปัจจัยที่มีผลกระทบต่อระดับการดำเนินการตาม โยบายรักษาสิ่งแวดล้อมของศูนย์แสดง สินค้า จำนวน 12 ข้อ</p>

<b>ข้อมูลเกี่ยวกับการปกป้องสิทธิผู้เข้าร่วมการวิจัย</b>
<p>ข้อมูลที่ได้จากการตอบแบบสอบถาม ผู้วิจัยจะใช้รหัสแทนชื่อและข้อมูลส่วนตัวของท่าน ในการบันทึกข้อมูล และ จะดำเนินการทำลายข้อมูลตลอดจนข้อมูลอื่นๆ ที่เกี่ยวข้องกับท่านภายหลังเสร็จสิ้นการวิจัย</p> <p>ความเสี่ยงที่อาจจะเกิดขึ้นเมื่อเข้าร่วมการวิจัย ท่านอาจรู้สึกอึดอัด หรืออาจรู้สึกไม่สบายใจอยู่กับบางคำถาม ท่านมีสิทธิ์ที่จะไม่ตอบคำถามเหล่านั้นได้ รวมถึงท่านมีสิทธิ์ถอนตัวออกจากโครงการนี้เมื่อใดก็ได้ โดยไม่ต้องแจ้งให้ทราบ ถ่วงหน้า และการไม่เข้าร่วมวิจัยหรือถอนตัวออกจากโครงการวิจัยนี้ จะไม่มีผลกระทบต่อท่านแต่อย่างใด</p> <p>ข้อมูลส่วนตัวของท่านจะถูกเก็บรักษาไว้ ไม่เปิดเผยต่อสาธารณะเป็นรายบุคคล และไม่มีการแสดงชื่อหรือที่อยู่ของ ท่านแต่อย่างใด แต่จะรายงานผลการวิจัยเป็นข้อมูลส่วนรวม ผู้ที่มีสิทธิ์เข้าถึงข้อมูลของท่านจะมีเฉพาะผู้ที่เกี่ยวข้องกับการวิจัยนี้ คือ นักวิจัย หรืออาจมีคณะบุคคลบางกลุ่มเข้ามาตรวจสอบความถูกต้อง เช่น ผู้ให้ทุนวิจัย สถาบันหรือองค์กรของรัฐที่มีหน้าที่ ตรวจสอบ และคณะกรรมการจริยธรรมฯ เป็นต้น</p> <p>การวิจัยครั้งนี้ท่านจะไม่ได้รับค่าตอบแทนและไม่เสียค่าใช้จ่ายใดๆ ทั้งสิ้น</p> <p>หากมีข้อมูลเพิ่มเติมทั้งด้าน ประโยชน์และ โทษที่เกี่ยวกับการวิจัยนี้ ผู้วิจัยจะแจ้งให้ทราบโดยรวดเร็วไม่ปิดบัง</p>

<p>หากท่านมีข้อข้องใจที่จะสอบถามเกี่ยวข้องกับการวิจัย ท่านสามารถติดต่อไปยังผู้วิจัย ได้ตลอดเวลา</p> <p>โครงการวิจัยนี้ได้รับการพิจารณารับรองจากคณะกรรมการจริยธรรมการวิจัยในคน สาขาสังคมศาสตร์ ซึ่งมี สำนักงานอยู่ที่คณะสังคมศาสตร์และมนุษยศาสตร์ มหาวิทยาลัยมหิดล ถนนพุทธมณฑล สาย 4 ตำบลศาลายา อำเภอพุทธมณฑล จังหวัดนครปฐม 73170 หมายเลขโทรศัพท์ 0 2441 9180 โทรสาร 0 2441 9181 หากท่านได้รับการปฏิบัติไม่ตรงตามที่ระบุไว้ ท่านสามารถติดต่อกับประธานคณะกรรมการจริยธรรมฯ หรือผู้แทน ได้ตามสถานที่และหมายเลขโทรศัพท์ข้างต้น</p>
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<b>ข้าพเจ้าได้อ่านรายละเอียดในเอกสารชี้แจงผู้เข้าร่วมการวิจัยนี้ ครบถ้วนแล้ว</b>
<p>ลงชื่อ.....ผู้เข้าร่วมวิจัย</p> <p>(.....)</p> <p>วันที่.....</p>



## APPENDIX C

### INFORM CONSENT AND VOLUNTARY CONSENT TO PARTICIPANT

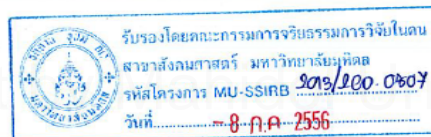
หนังสือแสดงเจตนายินยอมเข้าร่วมการวิจัยโดยได้รับการบอกกล่าวและเต็มใจ

ข้อมูลผู้เข้าร่วมการวิจัย			
		วันที่..... เดือน..... พ.ศ.....	
ข้าพเจ้าชื่อ		อายุ	ปี
อยู่บ้านเลขที่		ถนน	
ตำบล/แขวง		อำเภอ/เขต	
จังหวัด		รหัสไปรษณีย์	
หมายเลขโทรศัพท์			

ขอแสดงเจตนายินยอมเข้าร่วมโครงการวิจัยเรื่อง	ระดับการดำเนินการตามนโยบายรักษาสิ่งแวดล้อมของศูนย์แสดงสินค้าจากมุมมองของผู้จัดแสดงสินค้า
<p>โดยข้าพเจ้าได้รับทราบรายละเอียดเกี่ยวกับที่มาและจุดมุ่งหมายในการทำวิจัยรายละเอียดขั้นตอนต่างๆ ที่จะต้องปฏิบัติหรือได้รับการปฏิบัติ ประโยชน์ที่คาดว่าจะได้รับของการวิจัยและความเสี่ยงที่อาจเกิดขึ้นจากการเข้าร่วมการวิจัยรวมทั้งแนวทางป้องกันและแก้ไขหากเกิดอันตราย โดยได้อ่านข้อความที่มีรายละเอียดอยู่ในเอกสารชี้แจงผู้เข้าร่วมการวิจัยโดยตลอด อีกทั้งยังได้รับคำอธิบายและตอบข้อสงสัยจากหัวหน้าโครงการวิจัยเป็นที่เรียบร้อยแล้ว</p> <p>ข้าพเจ้าจึงสมัครใจเข้าร่วมในโครงการวิจัยนี้</p> <p>ข้าพเจ้าได้ทราบถึงสิทธิ์ที่ข้าพเจ้าจะได้รับข้อมูลเพิ่มเติมทั้งทางด้านประโยชน์และโทษจากการเข้าร่วมการวิจัย และสามารถถอนตัวหรืองดเข้าร่วมการวิจัยได้ทุกเมื่อ โดยจะไม่มีผลกระทบใดๆ ต่อข้าพเจ้าที่จะได้รับในอนาคตและยินยอมให้ผู้วิจัยใช้ข้อมูลส่วนตัวของข้าพเจ้าที่ได้รับจากการวิจัย แต่จะไม่เผยแพร่ต่อสาธารณะเป็นรายบุคคล โดยจะนำเสนอเป็นข้อมูลโดยรวมจากการวิจัยเท่านั้น</p>	

หากข้าพเจ้ามีข้อข้องใจที่จะสอบถามเกี่ยวข้องกับกรวิจัย ข้าพเจ้าสามารถติดต่อไปยังผู้วิจัยได้ตลอดเวลา
<p>โครงการวิจัยนี้ได้รับการพิจารณารับรองจากคณะกรรมการจริยธรรมการวิจัยในคน สาขาสังคมศาสตร์ ซึ่งมีสำนักงานอยู่ที่คณะสังคมศาสตร์และมนุษยศาสตร์ มหาวิทยาลัยมหิดล ถนนพุทธมณฑล สาย 4 ตำบลศาลายา อำเภอพุทธมณฑล จังหวัดนครปฐม 73170 หมายเลขโทรศัพท์ 0 2441 9180 โทรสาร 0 2441 9181 หากข้าพเจ้าได้รับการปฏิบัติไม่ตรงตามที่ระบุไว้ ข้าพเจ้าสามารถติดต่อกับประธานคณะกรรมการจริยธรรมฯ หรือผู้แทน ได้ตามสถานที่และหมายเลขโทรศัพท์ข้างต้น</p>

ข้าพเจ้าเข้าใจข้อความในเอกสารชี้แจงผู้เข้าร่วมการวิจัย และหนังสือแสดงเจตนายินยอมนี้โดยตลอดแล้ว จึงลงลายมือชื่อไว้	
ลงชื่อ.....ผู้เข้าร่วมวิจัย (.....) วันที่.....	ลงชื่อ.....ผู้ให้ข้อมูลและความยินยอม (นางสาว นันทพร นิ่งขวัญ) วันที่.....





## 6. อายุขององค์กร

 1 – 2 ปี 3 – 5 ปี 6 – 10 ปี มากกว่า 10 ปี

## 7. ลักษณะขององค์กร

 หน่วยงานราชการ/รัฐวิสาหกิจ สมาคม/ชมรม/มูลนิธิ องค์กรเอกชน (Private enterprise) โดยใช้เงินทุนในประเทศ องค์กรเอกชน (Private enterprise) โดยใช้เงินทุนต่างประเทศบางส่วนหรือทั้งหมด สาขาองค์กรภายในประเทศ (Local chain enterprise) สาขาองค์กรระหว่างประเทศ (International chain enterprise)

## 8. องค์กรของท่านมีนโยบายรักษาสิ่งแวดล้อม (Green policy) หรือไม่

 มี ไม่มี

## 9. คุณทราบถึงแนวทางการรักษาสิ่งแวดล้อมของงานจัดแสดงสินค้า (Green exhibition guideline) บ้างหรือไม่

 ทราบ, โปรดระบุ ..... ไม่ทราบ**ส่วนที่ 2: การประเมินระดับการดำเนินการตามนโยบายรักษาสิ่งแวดล้อม (Green practice level assessment)**

ในส่วนนี้ต้องการให้ผู้ตอบแบบสอบถามประเมินระดับการดำเนินการตามนโยบายรักษาสิ่งแวดล้อมของศูนย์แสดงสินค้าโดยเปรียบเทียบกับแนวทางการรักษาสิ่งแวดล้อมของงานแสดงสินค้า ซึ่งการดำเนินการตามนโยบายรักษาสิ่งแวดล้อม (Green practice) ในการศึกษาี้หมายถึง “การดำเนินการตามนโยบายที่เกี่ยวข้องกับความรับผิดชอบต่อสิ่งแวดล้อมขององค์กร” และ แนวทางการรักษาสิ่งแวดล้อมของงานแสดงสินค้า (Green exhibition guideline) หมายถึง “หลักการที่กำหนดแนวทางปฏิบัติที่เกี่ยวข้องกับการจัดแสดงสินค้าซึ่งมีจุดมุ่งหมายเพื่อลดผลกระทบต่อสิ่งแวดล้อม”

นอกจากนี้ ศูนย์แสดงสินค้า (Exhibition venue) ในการศึกษาี้หมายถึง “สถานที่ที่ใช้ในการจัดงานแสดงสินค้า รวมถึงบุคลากรที่ทำงานในสถานที่แห่งนั้น”

โปรดทำเครื่องหมาย  ลงใน  เพื่อแสดงขอบเขตที่ท่านเห็นด้วยหรือไม่เห็นด้วยกับข้อความด้านล่าง ซึ่ง

- (1) = ไม่เห็นด้วยอย่างยิ่ง
- (2) = ไม่เห็นด้วยปานกลาง
- (3) = ไม่เห็นด้วยเล็กน้อย
- (4) = ทั้งเห็นด้วยและไม่เห็นด้วย
- (5) = เห็นด้วยเล็กน้อย
- (6) = เห็นด้วยปานกลาง
- (7) = เห็นด้วยอย่างยิ่ง

การประเมินระดับการดำเนินการตามนโยบายรักษาสีสิ่งแวดล้อม (Green Practice Level Assessment)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>ขั้นตอนการจัดงานแสดงสินค้า (Exhibition production)</b>							
1. ศูนย์แสดงสินค้าแจ้งท่านให้ทราบล่วงหน้าเกี่ยวกับนโยบายการใช้ทรัพยากรอย่างมีคุณค่า							
2. ศูนย์แสดงสินค้าแนะนำท่านเกี่ยวกับวิธีการที่คุณสามารถใช้ทรัพยากรอย่างมีคุณค่า							
3. ศูนย์แสดงสินค้าแจ้งท่านให้ทราบล่วงหน้าเกี่ยวกับนโยบายการลดปริมาณของเสีย/ขยะ							
4. ศูนย์แสดงสินค้าแนะนำท่านเกี่ยวกับวิธีการที่คุณสามารถลดปริมาณของเสีย/ขยะ							
5. ศูนย์แสดงสินค้าแจ้งท่านให้ทราบล่วงหน้าเกี่ยวกับนโยบายการลดการใช้สารเคมี							
6. ศูนย์แสดงสินค้าแนะนำท่านเกี่ยวกับวิธีการที่คุณสามารถลดการใช้สารเคมี							
7. ศูนย์แสดงสินค้าแจ้งท่านให้ทราบล่วงหน้าเกี่ยวกับนโยบายการลดการใช้พลังงาน							
8. ศูนย์แสดงสินค้าแนะนำท่านเกี่ยวกับวิธีการที่คุณสามารถลดการใช้พลังงาน							
9. ศูนย์แสดงสินค้าลดการใช้โฟม พลาสติก และกระดาษตกแต่งเวที และ/หรือ บริเวณจัดแสดงสินค้า							
10. ศูนย์แสดงสินค้าสนับสนุนให้ท่านลดปริมาณการใช้โฟม พลาสติก และกระดาษในการตกแต่งบูทและ วัสดุจัดแสดง							

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
11. ศูนย์แสดงสินค้าส่งเสริมให้ท่านเลือกใช้วัสดุซ้ำ จากงานแสดงสินค้าครั้งก่อนหน้าที่จัดเตรียมโดยศูนย์แสดงสินค้า เช่น พรหม กุหาแสดงสินค้า ป้ายชื่อ							
12. ศูนย์แสดงสินค้าสนับสนุนให้ท่านใช้วัสดุซ้ำจากงานแสดง สินค้าครั้งก่อนหน้าของท่านสำหรับตกแต่งกุหาและ วัตถุจัดแสดง							
13. ศูนย์แสดงสินค้าสนับสนุนให้ท่านใช้วัสดุรีไซเคิลสำหรับ ตกแต่งกุหาและ วัตถุจัดแสดง							
14. ศูนย์แสดงสินค้าส่งเสริมให้ท่านลดการใช้ไฟฟ้าภายในกุหา จัดแสดงสินค้า							
15. ศูนย์แสดงสินค้าส่งเสริมให้ท่านแยกประเภทของเสีย/ขยะ							
16. ศูนย์แสดงสินค้าจัดเตรียมถังขยะเพื่อการรีไซเคิล โดยแบ่งตาม ประเภทขยะ ได้แก่ กระดาษ ขวดพลาสติก แก้ว และกระป๋อง							
17. ศูนย์แสดงสินค้าจัดเตรียมสถานที่ให้ท่านคืนป้ายชื่อหลังจบงาน แสดงสินค้าเพื่อนำไปใช้ในงานแสดงสินค้าครั้งต่อไป							
<b>การสื่อสารและการประชาสัมพันธ์ (Communication and public relations)</b>							
18. ศูนย์แสดงสินค้าส่งเสริมให้ท่านลดการใช้กระดาษเป็นสื่อ ประชาสัมพันธ์ เช่น โบปลิ้ว และแผ่นพับ โฆษณา							
19. ศูนย์แสดงสินค้าประชาสัมพันธ์งานแสดงสินค้าผ่านเว็บไซต์ ของงานแสดงสินค้า อีเมลล์ และ/หรือข้อความสั้นผ่าน โทรศัพท์เคลื่อนที่							
20. ศูนย์แสดงสินค้าสนับสนุนให้ท่านประชาสัมพันธ์กุหาจัดแสดง สินค้าของท่านผ่านเว็บไซต์ของบริษัท อีเมลล์ และ/หรือข้อความสั้น ผ่านโทรศัพท์เคลื่อนที่							
21. ศูนย์แสดงสินค้าให้ข้อมูลที่เกี่ยวข้องกับงานแสดงสินค้า ผ่านทางเว็บไซต์ของงานแสดงสินค้า และ/หรืออีเมลล์							
22. ศูนย์แสดงสินค้าสนับสนุนให้ท่านจัดเตรียมข้อมูลที่เกี่ยวข้อง กับกุหาแสดงสินค้าของท่านผ่านทางเว็บไซต์ของบริษัท และ/หรือ อีเมลล์ เพื่อหลีกเลี่ยงการใช้โบปลิ้วและแผ่นพับ โฆษณาในงานแสดง สินค้า							
23. ศูนย์แสดงสินค้าเสนอช่องทางลงทะเบียนอิเล็กทรอนิกส์ ผ่านทางเว็บไซต์ของงานแสดงสินค้า							

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
24. ศูนย์แสดงสินค้าสนับสนุนให้ท่านใช้จอแอลซีดี และ/หรือระบบกระจายเสียงอิเล็กทรอนิกส์ของสถานที่จัดงานเป็นสื่อประชาสัมพันธ์ เพื่อหลีกเลี่ยงการใช้ใบปลิวและแผ่นพับโฆษณาในงานแสดงสินค้า							
25. ศูนย์แสดงสินค้าส่งเสริมให้ท่านพิมพ์กระดาษทั้งสองด้านเมื่อท่านใช้กระดาษเป็นสื่อประชาสัมพันธ์							
26. ศูนย์แสดงสินค้าส่งเสริมให้ท่านใช้กระดาษรีไซเคิลเมื่อท่านใช้กระดาษเป็นสื่อประชาสัมพันธ์							
27. ศูนย์แสดงสินค้าจัดเตรียมสถานที่เพื่อเก็บรวบรวมวัสดุสิ่งพิมพ์ที่ผู้เข้าชมงานไม่ต้องการไว้ที่ทางออก เพื่อทำการแยกประเภทของเสีย/ขยะ ก่อนการรีไซเคิล							
<b>ของที่ระลึก (Souvenirs)</b>							
28. ศูนย์แสดงสินค้าส่งเสริมให้ท่านหลีกเลี่ยงการแจกของที่ระลึก							
29. ศูนย์แสดงสินค้าสนับสนุนให้ท่านเลือกสิ่งของที่มิประโยชน์เป็นของที่ระลึก ถ้ามีความจำเป็นต้องแจกของที่ระลึก							
30. ศูนย์แสดงสินค้าส่งเสริมให้ท่านเลือกของที่ระลึกที่ทำจากวัสดุที่เป็นมิตรกับสิ่งแวดล้อม							
31. ศูนย์แสดงสินค้าส่งเสริมให้ท่านเลือกของที่ระลึกที่ทำจากวัสดุรีไซเคิล							
32. ศูนย์แสดงสินค้าสนับสนุนให้ท่านหลีกเลี่ยงวัสดุจากพืชหรือสัตว์ที่ใกล้สูญพันธุ์							
33. ศูนย์แสดงสินค้าส่งเสริมให้ท่านเลือกของที่ระลึกที่ทำจากวัสดุที่หาได้ง่ายภายในท้องถิ่น							
34. ศูนย์แสดงสินค้าสนับสนุนให้ท่านเลือกของที่ระลึกที่สามารถผลิตได้ง่ายภายในท้องถิ่น							
35. ศูนย์แสดงสินค้าส่งเสริมให้ท่านลดการใช้บรรจุภัณฑ์สำหรับของที่ระลึก							
36. ศูนย์แสดงสินค้าสนับสนุนให้ท่านใช้บรรจุภัณฑ์สำหรับของที่ระลึกที่ทำจากวัสดุรีไซเคิล							
37. ศูนย์แสดงสินค้าจัดเตรียมสถานที่เพื่อเก็บรวบรวมของที่ระลึกที่ผู้เข้าชมงานไม่ต้องการไว้ที่ทางออก เพื่อนำไปบริจาคให้กับองค์กรที่ต้องการ							

**ส่วนที่ 3: ระบุปัจจัยที่มีผลกระทบต่อระดับการดำเนินการตามนโยบายรักษาสิ่งแวดล้อมของศูนย์แสดงสินค้า (Identify factors affecting green practice level of exhibition venues)**

ในส่วนนี้ต้องการให้ผู้ตอบแบบสอบถามระบุปัจจัยที่มีผลกระทบต่อระดับการดำเนินการตามนโยบายรักษาสิ่งแวดล้อม เพื่อที่จะหาช่องว่างระหว่างนโยบายรักษาสิ่งแวดล้อมและการดำเนินการตามนโยบายรักษาสิ่งแวดล้อมของศูนย์แสดงสินค้า ซึ่งนโยบายรักษาสิ่งแวดล้อม (Green policy) ในการศึกษาี้หมายถึง “แนวทางปฏิบัติที่เสนอโดยองค์กรที่มีจุดมุ่งหมายเพื่อลดผลกระทบด้านลบต่อสิ่งแวดล้อม” และการดำเนินการตามนโยบายรักษาสิ่งแวดล้อม (Green practice) หมายถึง “การดำเนินการตามนโยบายที่เกี่ยวข้องกับความรับผิดชอบต่อสิ่งแวดล้อมขององค์กร”

นอกจากนี้ ศูนย์แสดงสินค้า (Exhibition venue) ในการศึกษาี้หมายถึง “สถานที่ที่ใช้ในการจัดงานแสดงสินค้า รวมถึงบุคลากรที่ทำงานในสถานที่แห่งนั้น”

โปรดทำเครื่องหมาย ✓ ลงใน  สอดขอบเขตที่ท่านเห็นด้วยหรือไม่เห็นด้วยกับข้อความด้านล่าง ซึ่ง

- (1) = ไม่เห็นด้วยอย่างยิ่ง
- (2) = ไม่เห็นด้วยปานกลาง
- (3) = ไม่เห็นด้วยเล็กน้อย
- (4) = ทั้งเห็นด้วยและไม่เห็นด้วย
- (5) = เห็นด้วยเล็กน้อย
- (6) = เห็นด้วยปานกลาง
- (7) = เห็นด้วยอย่างยิ่ง

ปัจจัยที่มีผลกระทบต่อระดับการดำเนินการตามนโยบายรักษาสิ่งแวดล้อมของศูนย์แสดงสินค้า (Factors Affecting Green Practice Level of Exhibition Venue)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. ศูนย์แสดงสินค้ามีค่าใช้จ่ายในการลงทุนสูงเมื่อดำเนินการตามนโยบายรักษาสิ่งแวดล้อม							
2. ศูนย์แสดงสินค้าใช้เวลานานเมื่อดำเนินการตามนโยบายรักษาสิ่งแวดล้อม							
3. ศูนย์แสดงสินค้ามีค่าใช้จ่ายด้านการบำรุงรักษาสูงเมื่อดำเนินการตามนโยบายรักษาสิ่งแวดล้อม							
4. ศูนย์แสดงสินค้าต้องการบุคลากรที่มีคุณสมบัติเหมาะสมและมีทักษะเฉพาะในการดำเนินการตามนโยบายรักษาสิ่งแวดล้อม							
5. ศูนย์แสดงสินค้ามีค่าใช้จ่ายสูงในการฝึกอบรมบุคลากรที่มีคุณสมบัติเหมาะสมและมีทักษะเฉพาะ							

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
6. ศูนย์แสดงสินค้าใช้เวลาานในการฝึกอบรมบุคลากรที่มีคุณสมบัติเหมาะสมและมีทักษะเฉพาะ							
7. ศูนย์แสดงสินค้ารักษาความสม่ำเสมอในการดำเนินการตามนโยบายรักษาสิ่งแวดล้อม							
8. พนักงานของศูนย์แสดงสินค้ามีความรู้เกี่ยวกับการรักษาสิ่งแวดล้อม							
9. พนักงานของศูนย์แสดงสินค้ามีทัศนคติด้านบวกต่อการรักษาสิ่งแวดล้อม							
10. พนักงานของศูนย์แสดงสินค้ามีความรู้ความเข้าใจที่ชัดเจนเกี่ยวกับนโยบายรักษาสิ่งแวดล้อม							
11. พนักงานของศูนย์แสดงสินค้าตระหนักรู้ในการดำเนินการตามนโยบายรักษาสิ่งแวดล้อม							
12. พนักงานของศูนย์แสดงสินค้ากระตือรือร้นในการดำเนินการตามนโยบายรักษาสิ่งแวดล้อม							

ขอบคุณที่เข้าร่วม โครงการ

## APPENDIX E

### QUESTIONNAIRE (ENGLISH)

#### SURVEY QUESTIONNAIRE

##### GREEN PRACTICE LEVEL OF EXHIBITION VENUES FROM EXHIBITORS' PERSPECTIVES

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#### Section 1: Exhibitor's profile

Please fill in the blank and mark  in ( ) where applicable

1. Exhibition title	
---------------------	--

2. Name of exhibition venue

- Queen Sirikit National Convention Center  
 Bangkok International Trade & Exhibition Centre  
 IMPACT Arena, Exhibition and Convention Center

3. Times exhibited in this exhibition venue

- Once                                       2 – 5 times  
 6 – 10 times                                 More than 10 times

4. Type of business

- Food and Beverages                       Textile and Jewelry  
 Home and Furniture                       Industry and Technology  
 Book and Printing media                 Electrical and Electronic appliance  
 Other, please specific.....

5. Size of company

- Small (less than 50 employees)  
 Medium (50 – 200 employees)  
 Large (more than 200 employees)

6. Age of organization

- 1 – 2 years                       3 – 5 years  
 6 – 10 years                       More than 10 years

7. Type of organization

- Government/State enterprise  
 Association/Club/Foundation  
 Private enterprises with local funding  
 Private enterprises with partial or full foreign funding  
 Local chain enterprises  
 International chain enterprises

8. Does the company have green policy?

- Yes  
 No

9. Are you familiar with any green exhibition guideline?

- Yes, please specific .....
- No

**Section 2: Green practice level assessment**

This section requires the respondent to assess green practice level of exhibition venue comparing to green exhibition guideline, which **green practice** in this study refers to *“the implementation of policy into actual operation regarding to the organization’s environmental commitment”*, and **green exhibition guideline** refers to *“a principle that determines the practice regarding to the exhibition which aims to minimize the negative impact on the environment”*. Furthermore, **exhibition venue** in this study refers to *“the place for organizing and holding the exhibitions including staff who work for that place”*.

Please mark ✓ in  to indicate the extent to which you agree or disagree with each statement below, where:

- (1) = Strongly disagree
- (2) = Moderately disagree
- (3) = Slightly disagree
- (4) = Neither agree or disagree
- (5) = Slightly agree
- (6) = Moderately agree
- (7) = Strongly agree

Green Practice Level Assessment	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Exhibition production</b>							
1. The venue <b>informs</b> you in advance about its <b>efficient resource usage policy</b> .							
2. The venue <b>guides</b> you about how you can use <b>efficient resource</b> .							
3. The venue <b>informs</b> you in advance about its <b>waste reduction policy</b> .							
4. The venue <b>guides</b> you about how you can <b>reduce waste</b> .							
5. The venue <b>informs</b> you in advance about its <b>chemical usage reduction policy</b> .							
6. The venue <b>guides</b> you about how you can <b>reduce chemical usage</b> .							
7. The venue <b>informs</b> you in advance about its <b>energy consumption reduction policy</b> .							
8. The venue <b>guides</b> you about how you can <b>reduce energy consumption</b> .							
9. The venue <b>reduces</b> usage of foam, plastic, and paper decorations on <b>stage and/or exhibition area</b> .							
10. The venue <b>supports</b> you to reduce volume of foam, plastic, and paper usage for <b>booth decorations and display materials</b> .							
11. The venue encourages you to select <b>reused materials</b> from previous exhibitions that <b>offered by the venue</b> , for instance carpeting, system booths, and name badges.							

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
12. The venue supports you to <b>reuse materials</b> from <b>your previous exhibitions</b> for booth decorations and display materials.							
13. The venue supports you to use <b>recycled materials</b> for booth decorations and display materials.							
14. The venue encourages you to reduce electricity use in the booth.							
15. The venue encourages you to separate waste.							
16. The venue prepares waste bin for recycling garbage categorized by paper, plastic bottles, glass, and cans.							
17. The venue prepares station for you to return the name badges after finishing the exhibition to reuse them for the upcoming exhibitions.							
<b>Communication and public relations</b>							
18. The venue encourages you to reduce paper usage such as handbills and brochures as media.							
19. The venue <b>promotes the exhibition</b> through the use of <b>exhibition's website</b> , e-mail, and/or SMS on mobile phone.							
20. The venue <b>supports you to promote your display booth</b> through the use of <b>company's website</b> , e-mail, and/or SMS on mobile phone.							
21. The venue <b>provides relevant information for exhibition</b> via <b>exhibition's website</b> and/or e-mail.							
22. The venue <b>supports you to provide relevant information of your display booth</b> via <b>company's website</b> and/or e-mail to avoid using handbills and brochures during the exhibition.							
23. The venue offers electronic registration via exhibition's website.							
24. The venue supports you to use LCD screen and/or electronic sound distribution system of the venue as a medium for public announcements to avoid using handbills and brochures during the exhibition.							
25. The venue encourages you to print double-sided when you use paper as media.							
26. The venue encourages you to use recycled paper when you use paper as media.							
27. The venue provides a place to collect any unwanted printing materials from visitors upon exit for waste separation before recycling.							

Green Practice Level Assessment	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Souvenirs</b>							
28. The venue promotes you to avoid distributing souvenirs.							
29. The venue supports you to select useful objects as souvenirs, if souvenirs are needed.							
30. The venue promotes you to select souvenirs made from environmental friendly materials.							
31. The venue encourages you to select souvenirs made from recycled materials.							
32. The venue advocates you to avoid materials from plants or animals facing extinction.							
33. The venue encourages you to select souvenirs made from materials that can be easily found within local area.							
34. The venue supports you to select souvenirs that can be easily manufactured within local area.							
35. The venue promotes you to minimize packaging for souvenirs.							
36. The venue advocates you to use recycled packaging for souvenirs.							
37. The venue provides a place to collect any unwanted souvenirs from visitors upon exit to donate them to organizations in need.							

### Section 3: Identify factors affecting green practice level of exhibition venues

This section requires the respondent to identify the factors that affect green practice level in order to find the gap between green policy and practice of exhibition venue, which **green policy** in this study refers to “*a course of action proposed by organization that aims to minimize the negative impact on the environment*”, and **green practice** refers to “*the implementation of policy into actual operation regarding to the organization’s environmental commitment*”. Furthermore, **exhibition venue** in this study refers to “*the place for organizing and holding the exhibitions including staff who work for that place*”.

Please mark ✓ in  to indicate the extent to which you agree or disagree with each statement below, where:

- (1) = Strongly disagree
- (2) = Moderately disagree
- (3) = Slightly disagree
- (4) = Neither agree or disagree
- (5) = Slightly agree
- (6) = Moderately agree
- (7) = Strongly agree

Factors Affecting Green Practice Level of Exhibition Venue	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. The venue has high investment cost to implement green policy.							
2. The venue uses large amount of time to implement green policy.							
3. The venue owns high maintenance cost to implement green policy.							
4. The venue requires for specific skills and qualified person to implement green policy.							
5. The venue holds high training cost for specific skills and qualified person.							
6. The venue spends long time for training for specific skills and qualified person.							
7. The venue keeps consistency to implement green policy.							
8. The staff of venue have the knowledge about environment preservation.							
9. The staff of venue have positive attitude toward environment preservation.							
10. The staff of venue have clear understanding about green policy before implementation.							
11. The staff of venue have an awareness to implement green policy.							
12. The staff of venue is enthusiastic to implement green policy.							

Thank you for participation

**APPENDIX F**  
**THAILAND CONVENTION AND EXHIBITION BUREAU'S**  
**GREEN EXHIBITION GUIDELINE**

Green Meetings  
Guideline



# Green Meetings: Advancing the Future of MICE

**Green Meetings Definition:** “Incorporate environmental considerations throughout all stages of the meeting process in order to minimize the negative impact on the environment and make a positive impact to host communities in terms of environmental and social legacies.”

(Source: Convention Industry Council)

## Green Meetings Good for Business

- Save money by conserving resources
- Create and enhance competitive advantage and reputation
- Open up new or niche markets
- Present positive opportunities for marketing, improve public relations and demonstrate a commitment to corporate responsibility

As the increase of green organization issue, Thailand Convention & Exhibition Bureau (TCEB) and Thai MICE players attempt to launch campaign called “Green Meetings Campaign” with the aim of promoting environmental responsibility. In addition, TCEB and Thai’s MICE players, initiated Green Meetings Campaign as a marketing ploy to attract oversea MICE Business to organize meetings and events with unique, responsible tourism activities, as well as to experience Thai culture and hospitality.

As well as, TCEB launches ‘Green Survey’ to collect up-to-date information. This is to demonstrate innovative efforts to significantly minimize the environmental impacts of players in MICE industry. Subsequently, TCEB and TEI (Thailand Environmental Institute) use information from green survey apply to Green Meetings Guideline.

This guideline provides information gathered from MICE players around the country. In this guideline, environmentally conscious meetings and events are those planned in such a way as to eliminate, reduce, or recycle waste. While focusing on municipal solid waste, this guideline also touches on other environmental concerns. It is intended to heighten the environmental consciousness of event planners and demonstrate the advantages of conducting environmentally aware events.

Additionally, TCEB will support MICE players who implement green meetings by promoting them through the recognition list and providing education. Importantly, Green Meetings Campaign will be benefit to MICE players such as; create business opportunity, draw MICE visitors, save investment in long term, present positive opportunities for marketing, and improve public relations and demonstrate a commitment to corporate responsibility.

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# Conventions / Exhibitions Venues

## Valuable Resource Usage

- Use electronic devices that are energy efficient, such as compact fluorescent lighting or air conditioning with an energy efficiency rating of 5.
- Install a programmable thermostat set at 25 degrees Celsius for air conditioning.
- The venue must be easily accessible by public transportation.

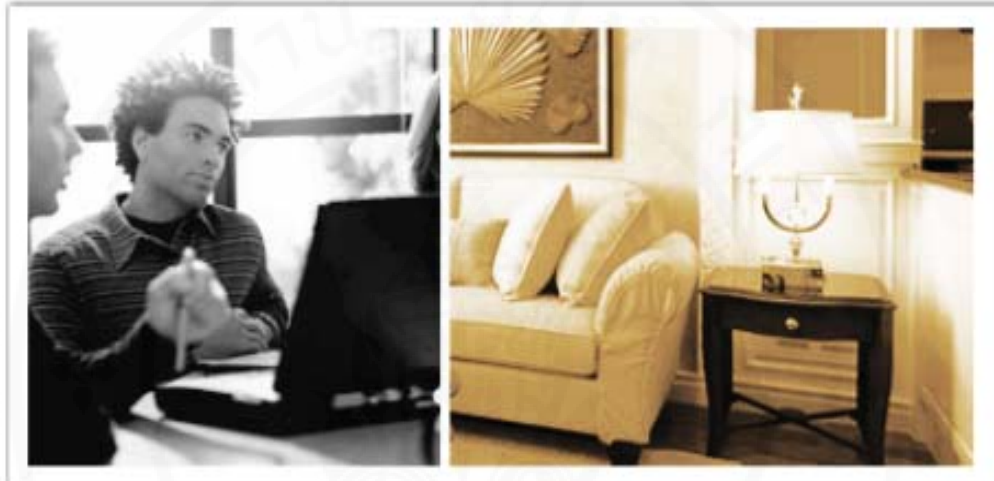
## Waste and Pollution Reduction

- Decorate the venue with green shrubs and/or potted plants instead of floral decorations to reduce waste and reuse them for upcoming events.
- Prepare waste bins for recycling garbage, categorized by 4 types: paper, plastic bottles, glass, and cans.



## Chemical Reduction

- Use environmental friendly cleaning products that can easily decompose through natural means, such as soap, liquid hand wash, air fresheners, and bathroom cleaning fluids.



Inform visitors upon arrival about the policies of the organization's environmental friendly principles and place signage around the hotel perimeter to help enact and reinforce the idea.

State the CEO's environmental friendly mission and what it involves, such as energy conservation, water conservation, waste management, avoiding the use of chemical products, increasing of green area of the hotel, and green procurement.

# Accommodations

## Valuable Resource Usage

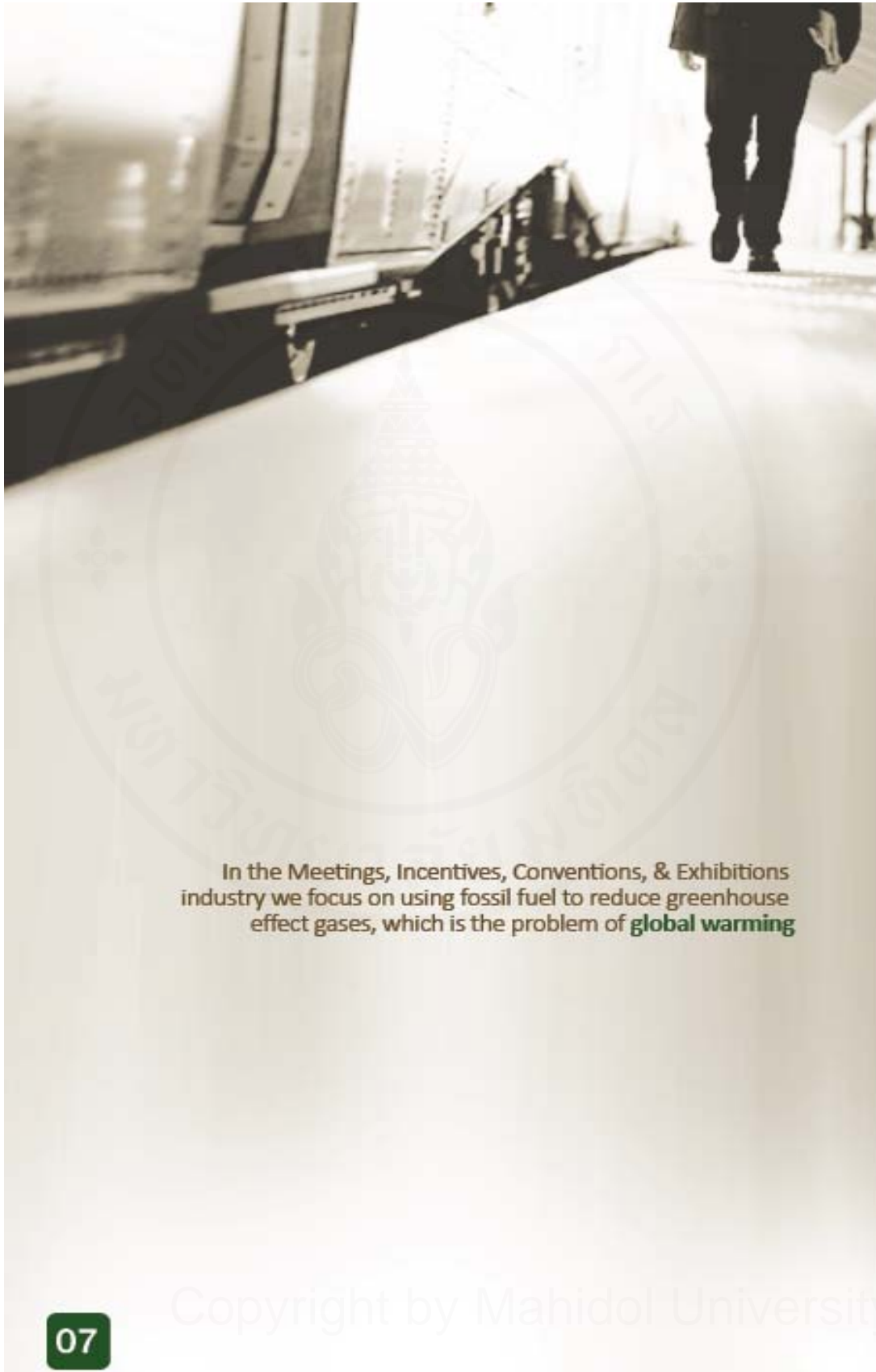
- Inform guests who do not wish to use a daily towel service of a linen reuse program to help conserve water resources.
- Use electronic devices that are energy efficient, such as compact fluorescent
- Lighting and air conditioners with an energy efficiency rating of 5. The venue must have convenient access to public transportation.

## Waste and Pollution Reduction

- Install dispensers that can be refilled with cleaning fluids such as shampoo, conditioner, and liquid soap to reduce package waste.
- Use product packages that can be refilled in the room to reduce package waste.

## Chemical Reduction

- Use environmental friendly cleansing products such as soap, liquid hand wash, air fresheners, and bathroom cleaning fluids that can decompose by natural procedures.



In the Meetings, Incentives, Conventions, & Exhibitions industry we focus on using fossil fuel to reduce greenhouse effect gases, which is the problem of **global warming**

# Transportation for Delegates, Exhibition Visitors, Tourist and Equipment

## Energy Consumption and Pollution Reduction

- Encourage visitors to research information for public transport to the event destination prior to the event date.
- Provide a shuttle bus service along the event route to serve as public transportation to the venue to reduce personal transportation.
- Use transportation vehicles that are environmental friendly, such as hybrid cars that use electric, and fossil fuel vehicles that run on bio diesel or gasohol.



# Food and Beverages

## Waste and Pollution Reduction

- Use durable dishes and utensils for food and beverage serving packs.
- Reduce volume of one-time, disposable utensils made of foam, plastic, and paper.
- Avoid using pre-packaged seasonings and promote the use of containers such as jars or bottles that can be shared to reduce packaging waste.
- Make an agreement with the raw material vendor for fresh food or prepared food to use durable dishes and utensils to reduce the use of foam and plastic packaging.
- Arrange to donate leftover food to organizations in need.

## Chemical Reduction

- If forced to use one-time, disposable containers, select a natural material that can easily decompose, such as banana leaves, plastic that is agriculturally based, or paper instead of plastic or foam.
- Select locally grown raw materials for food preparation that are organic to promote the reduction of chemicals and increase consumer safety.

# Convention and Exhibition Production

## Valuable Resource Usage

- Have an offsite meeting venue to reduce the use of an air conditioned room by having meetings under a tree or at an outdoor terrace.
- Turn off the LCD projector when not in use for a long time during a conference and put it on stand-by mode.
- Discourage meetings with a formal business dress code for delegates to be able to raise the thermostat of the air conditioner in the meeting room to at least 25 degrees Celsius.
- Provide drinking water in glass bottles or by refilling from a jug to reduce water consumption in the case the number of delegates present are fewer than expected.
- Collect leftover notepads and stationery from the delegates' tables for reuse in the next event.
- Print double-sided conference materials.
- Reduce electricity use in the booths.
- Avoid distributing souvenirs, but if needed, select genuinely useful objects made from environmental friendly materials that can be easily found and manufactured regionally.



## Waste and Pollution Reduction

- Set up a station to collect delegate name badges upon exit for reuse.
- Set up a station to collect any unwanted souvenirs or give-away premiums so they can be donated to organizations in need.
- Select recyclable materials or reusable materials from previous events, for instance carpeting, exhibition boards, system booths, name badges, flags, and table skirts.
- Reduce paper usage as a means of media and encourage using electronic media such as memory sticks or downloading materials from the event Web site.
- Reduce usage of foam construction on stage and area decorations.
- Reduce usage of plastic bags and containers in food and beverage exhibition booths.
- Provide a station where the delegates or event visitors can discard unwanted printing materials such as handbills and pamphlets upon exiting as a means of waste separation before recycling, which would include delegate badges for reuse.

## Chemical Reduction

- Use environmental friendly bags for delegates to carry their conference papers around instead of plastic envelopes.



Encourage the idea of hosting an event that is environmentally friendly to the organizer and guests to create awareness and cooperation within the organization.

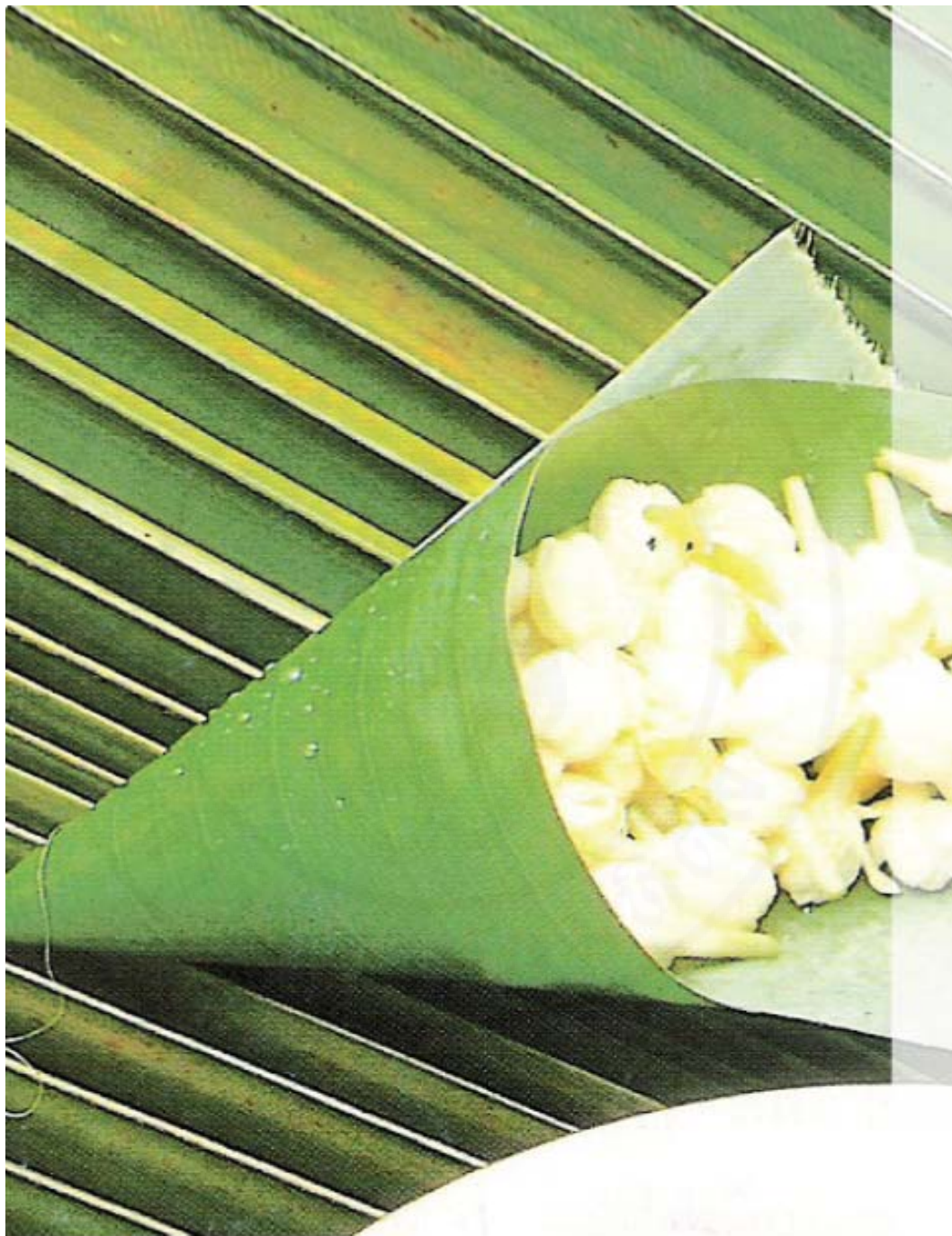
# Communication and Public Relations

## Waste and Pollution Reduction

- Promote the event through the use of event's Web site, e-mails to members, e-newsletters through the organization, and SMSs to mobile phones. Use an LCD screen as a medium for public announcements as well as the venues PA system to avoid using handbills, brochures, and letters.

## Chemical Reduction

- Design an environmental friendly medium to promote the event or consider a plan to reduce paper usage, promote paper recycling paper, and employ materials easily found within the region.



# Tokens and Souvenirs

## Waste and Chemical Reduction

- Select souvenirs made from recyclable materials or materials that have already been used.
- Use manufacturing materials easily found within the region.
- Keep packaging materials for souvenirs to a minimum.

## Environment Preservation

- Eco-Design
- Green Procurement
- Avoid ingredients from plants or animals facing extinction.



# General Office Procedures

## Valuable Resource Usage

- Focus on using environmental friendly office supplies and using energy efficient compact fluorescent lighting.

## Increase the Potential within the Employee

- Define a policy of promoting environmental friendly ideas and portray the policy as the organization's mission statement for MICE events, including the tourism industry as well.
- Change employee behavior to be more environmental friendly through various policies such as promoting the turning off of computer monitors and photocopying machines when not in use to save energy, focusing on setting a designated time period of turning on and off air conditioners during office hours, and separating waste into non-recyclable and recyclable, reducing the use of packaging, promoting car pooling, etc.
- Promote a green procurement policy by using green label materials, take-back programs, and green leaf services for such things as office supplies and MICE events.
- Make an agreement with the event contractor or organizer to use material that are environmental friendly or can be recycled.

# Glossary

## 3R (Reduce, Reuse & Recycle)

- Environmental management that focuses on the reduction of products and resources, reusing materials and recycling waste.

## Alternative fuel

- Alternative fuel such as gasohol, bio diesel, natural gas, and hydrogen instead of petroleum or gases that emit pollution from engines or factory machinery.

## Carbon offset

- Reduction of greenhouse gas emissions into the atmosphere. Carbon offsets are measured in metric tons of carbon dioxide-equivalent (CO<sub>2</sub>e). One carbon offset represents the reduction of one metric ton of carbon dioxide, or its equivalent in other greenhouse gases.

## Corporate Social Responsibility: CSR

- A concept whereby organizations consider the interests of society by taking responsibility for the impact of their activities on customers, suppliers, employees, shareholders, communities and other stakeholders, as well as the environment. This obligation is seen to extend beyond the statutory obligation to comply with legislation and sees organizations voluntarily taking further steps to improve the quality of life for employees and their families as well as for the local community and society at large.

## Greenhouse gases

- Gases that keep heat that can result in global warming or climate change such as carbon dioxide, methane, nitrous oxide, Hydroflourocarbons, Perflourocarbons, and Sulfurhexaflouride.

### Green label

- A standard designation for products that have been carefully created by selected raw materials in the process of production, utilization and waste management after usage to have the least negative effect on the environment compared with products of the same line.

### Green leaf

- A project that focuses on developing efficient energy consumption to improve the environment for the tourism business, including hotels.

### Green meeting

- Improving meeting management by supporting collaboration and the development and dissemination of resources and opportunities that improve the environmental performance of meetings and events by putting into consideration the idea of sustainability and reducing negative effects that might occur to the environment through event organizing that result in excess use of resources and energy.

### Green procurement

- Selecting environmental friendly products such as green label products and green hotels.

### Organic vegetables & fruits

- Promote agricultural products that use harvest practices that are chemical free and avoid GMO plants, use no irradiation processes, and grow through natural methods such as using organic fertilizers.

### Sustainability

- The ability to meet the wants of the present day population without reducing the ability to meet the wants of the population in the future, for instance, through the consumption of natural resources or releasing pollution.

### Take-back program

- The process where manufacturers ensure that all sorts of materials are reused, recycled, or disposed of properly instead of going to landfills.

## Green Meetings Websites

### Thailand Convention & Exhibition Bureau

- <http://www.tceb.or.th>

### Green Meetings Thailand

- <http://www.greenmeetingsthailand.com>

### Green Meeting Guide

- <http://www.greenmeetingguide.com>

### Green Leaf Foundation

- <http://www.greenleafthai.org/en/index.php>

### Green Meetings Project at EPA

- <http://www.epa.gov/oppt/greenmeetings>

### Thailand Environment Institute (TEI)

- [http://www.tei.or.th/th\\_main.htm](http://www.tei.or.th/th_main.htm)

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- <http://www.imex-frankfurt.com/envaward.html>

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**PUBLICATIONS**

The Investigation of Green Exhibition  
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