

## Characteristic of Green Event Practices in MICE Tourism: A Systematic Literature Review

Hassnah Wee, Nor Azah Mustapha, Muhammad Saufi Anas  
Faculty of Hotel and Tourism Management Universiti Teknologi MARA, Cawangan Selangor,  
Malaysia  
Email: hassnah739@uitm.edu.my

To Link this Article: <http://dx.doi.org/10.6007/IJARBSS/v11-i16/11234> DOI:10.6007/IJARBSS/v11-i16/11234

**Published Date:** 26 September 2021

### Abstract

This study systematically reviewed green practices in Meeting, Incentive, Convention, and Exhibition (MICE) tourism from five major journal databases: Google Scholar, ScienceDirect, Scopus, MDPI, and Emerald. Six criteria, including MICE tourism, MICE green event, MICE sustainability, MICE green practices, sustainable event, and the characteristic green event addressed in the papers, were used to evaluate the published papers using a systematic content analysis review method. Several studies on "green" and "sustainable" practices have been conducted, but none on green practices in MICE tourism. As a result, a systemic literature review was conducted on 20 articles published between 2009 and 2019, 17 (n=17, in Scopus-indexed journals) and three (n=3, in conference/symposium publications) to assess the features of green practices in MICE tourism. The content analysis discovered green venues, green accessibility, green advertising and marketing, green food and beverages, and green waste management. This paper exemplifies the trend of recent studies focusing on MICE tourism green practices perception and feedback from participants and stakeholders in developing a green MICE tourism destination. This topic should be researched further in the future.

**Keywords:** MICE Tourism, Green Practices, Sustainable Event, Systematic Literature Review

### Introduction

MICE is an acronym for the word meetings, incentives, conventions, and exhibitions. The MICE industry has now become one of the most significant contributors to the tourism sector. This convention and meetings had experienced remarkable growth during this past decade due to high demand and supply. This type of industry is one of the fastest-growing segments of the global tourism industry. Meetings, incentives, conventions, and exhibitions activities such as conferences, congresses, and trade shows comprise the MICE (Meeting, Incentive, Convention, and Exhibition) tourism sector. This sector is one of the most dynamic and important sectors of the tourism industry, focusing on business activities rather than leisure.

Based on the World Tourism Organization (UNWTO) (2006), the MICE segment has experienced steady growth and becoming the fastest-growing segment and significant contributor to the tourism industry for the past ten years. According to International Meeting Statistics of the Union of International Associations (UIA), in 2016, there were approximately 458,453 international meetings held worldwide. Thus, MICE plays an essential role in the growth of tourism industries globally, which resulted in a high yield profit. Substantial growth in the conference and meeting industries has taken place over the past decade, and countries have responded by increasing the provision of facilities and services as a means of gaining this lucrative market share (Dwyer & Forsyth, 1996). Events now play a crucial role in tourism motivators, the development and marketing plans of most destinations. Getz (2008) pointed out that one of the significant factors on destination competitiveness is planned tourism events.

Tourism and events both can negatively affect the surrounding environment (Moise & Macovei, 2014). According to United Nations Environment Programme (UNEP) and UNWTO (2008) report, five percent of global CO<sub>2</sub> emissions are contributed by tourism and its related industries, primarily due to air transportation, lodging, and tourist activities. Researches were conducted to help event planners or organizers manage more sustainable events or, in another name, a "green" event (DiSilets & Dickerson, 2008). These researches usually provide guidelines that a critical player in the event industry can use to have or be aware of the green practices.

Several previous types of research studies on this "green" and "sustainable" area have been carried out by several researchers to help better understand one of the efforts to reduce the impacts of the MICE tourism industry. Among the areas examined by the previous researchers were; perceived attributes on event sustainability in the MICE industry (Buathong & Lai, 2017), the effect of environmental knowledge and cultural experiences of green practices (Boo & Park, 2013), sustainable tourism development practices of MICE venue providers (Hamid, Ismail & Fuza, 2012) and perceptions and willingness of attendees to participate in environmental sustainability (Jung et al., 2016). Besides, few past types of research have looked into the 'green' practices and green exhibition approach, green behavior, green marketing strategies, and consumer perceptions and involvement in green events (Xifang & Ruijuan, 2019; Han et al., 2019; Wang & Dai, 2019; Wang, Chen, & Li, 2019; Wong, Wan & Qi, 2015).

Even though the study on sustainability, green event, and practices in the MICE industry is increasingly being conducted recently, none of the studies focusing on the characteristics of green practices in MICE tourism. Therefore, a systematic literature review (SLR) is carried out to fill up the gap. So, the primary purpose of conducting this SLR is to identify the characteristic of green practices in the MICE tourism. The guideline would help the MICE stakeholders develop and carry out innovative, eco-friendly, and sustainable events. This paper aims to find the answer to this research questions:

1. What are the characteristics of green event practices in MICE tourism?
2. What are the main issues addressed in the published studies?

**Literature Review**

*Sustainability* was defined by the World Commission on Environment and Development (WCED) in 1987 as "development that meets the requirements of the present without jeopardizing future generations' ability to satisfy their own needs." Furthermore, green can be associated with the decision to hold safer, healthier, and less troublesome events for the environment and community (Holleran, 2008).

Green practices have features that can affect socially responsible activities (Business Events Australia, 2008) and can be related to a unique programme that the organizers do to demonstrate their duty and attention to environmentally friendly characteristics (Papadas, Avlonitis, & Carrigan, 2017). The topic of sustainability is an essential component of green activities (Aronsson, 2000). As a result, the phrase has a broader meaning that includes the environment, economic, and socio-cultural impact, as expressed in the triple-bottom-line (TBL) concept (Font and Harris, 2004; Getz, 2009).

The implementation of MICE events can cause several environmental problems, such as air pollution, increased food wastage, and energy consumption for the host city and population (Wu, Cheng, & Hong, 2017). Due to the large scale gathering of people, it can contribute to a "potential negative impact on the air, soil, water, resources, and people" (Dickson & Arcodia, 2010). When assessing the event performance, it usually involves the comprehensive valuation of the local communities' economy, environment, and social-cultural.

Though the event attendees are slightly reluctant to accept organizers promised on the environmental concerns, it can be overcome by adequately planned the execution of the green practice in the MICE industry (Davis, 1993). The stakeholders such as government agencies, sponsors, event planners, venues, and local communities should involve in all stages of planning to implement the green practices in the MICE events (Jennifer & Warwick, 2010). Therefore, to get long-term support and minimize conflicts towards the implementation of green practices, the stakeholders must have enough information on the importance and cost-benefits analysis of green practices. The cooperation may build a strong identity and social capital in the community (Macbeth, Carson & Northcote, 2004). However, the awareness of green practices among attendees and the stakeholders has increased, which has changed the perception of not being environmentally friendly in organizing the MICE events (Kim, Lee & Fairhurst, 2017).

In 2010, a study was conducted by the American Society of Association Executives (ASAE) stated that most of the event planners have carried out eco-friendly practices in organizing the event (Kornegay, 2011). Based on the International Trade Centre (2017) survey, 88% of Americans are concerned about environmental issues and urge the government to take full responsibility for that matter. Besides, event planners are more concerned about environmental protection; therefore, they introduce eco-friendly events. The report issued by Meeting Strategies Worldwide (2009) stated that approximately half of all professional planners (51% of independent planners, 47% of corporate planners, and 44% percent of association and government planners) focused on sustainability events.

Mair and Laing (2012) identified factors that can influence and enhance the event greening process, namely image, cost-saving, needs from the consumer, values of the industry, and CSR policy. Besides, few challenges that can affect the greening process have been identified, such as skills, knowledge, awareness, time and resources constraint. Their study helped event planners become familiar with the fundamental influences and challenges in organizing eco-friendly events.

There are several benefits of implementing the green practices in the MICE events such as cost and energy saving, reduction of waste, enhancing the image of the company, improving event experiences at a convention center (Singapore Tourism Board (STB), 2013), and fulfilling with corporate social responsibility (Gecker, 2009). Nowadays, "green" indicates innovation and future trends in conducting responsible MICE events, contributing to local communities' benefits. In this case, sustainability or "green" can be highlighted as a marketing tool that can boost the MICE industry and as a stimulus to meet the sustainability goals (Rittichainuwat & Mair, 2012). Besides, an understanding and support from the local communities and the government are essential for successful events (Buanthong & Lai, 2017).

Therefore, if the country aims to succeed in sustainable development, multiple stakeholders must coordinate (Buanthong & Lai, 2019). In the decision-making process, the MICE event attendees' have increasingly given priority to the green practices of the organizers (Modica, Altinay, Farmaki, Gursay, & Zenga, 2018). Previous studies also have provided evidence that people tend to get involved in the event which adapting the green practices (Shen, Si, Yu & Si, 2019).

### Methods

The data for this study were obtained from the five popular online databases, namely Google Scholar, ScienceDirect, Scopus, MDPI, and Emerald, which stored empirical research papers in social science, tourism, and hospitality sectors. A preliminary material search yielded 31,200 results. The articles chosen were published between 2009 and 2019, presenting the ten years trend of research. Table 1 indicates the process of selecting the articles that are related and suitable to run the systematic literature review on the characteristic of green event practices in MICE events.

Table 1-  
*Summary of Constructs and Reliability Results*

Search Engine	Search String used
Google Scholar	allintitle: ("MICE tourism" OR "MICE green event" OR "MICE sustainability" OR "MICE green practices" OR "Sustainable event" OR "Characteristic Green Event")
ScienceDirect	("MICE tourism" OR "MICE green event" OR "MICE sustainability" OR "MICE green practices" OR "Sustainable event" OR "Characteristic Green Event")
Scopus	TITLE-ABS-KEY (("MICE tourism" OR "MICE green event" OR "MICE sustainability*" OR "MICE green practice*" OR "Sustainable event" OR "Characteristic Green Event"))

MDPI	("MICE tourism" OR "MICE green event" OR "MICE sustainability" OR "MICE green practices" OR "Sustainable event" OR "Characteristic Green Event")
Emerald	("MICE tourism" OR "MICE green event" OR "MICE sustainability" OR "MICE green practices" OR "Sustainable event" OR "Characteristic Green Event")

At the screening process, inclusion criteria were set to ensure that relevant articles to the study's objective are included in the review. Criteria that is set in the screening process are as follow:

- a. The material chosen is a research article
- b. The article was written in English
- c. The article was published from 2009 until 2019
- d. Focusing on the green event and sustainable events in MICE tourism

Five hundred twenty-five articles were selected after the screening process. The next process is the filtering process, where exclusion criteria have been set to ease the selection of materials and remove the illogical result causing the keywords search engine. The following exclusion criteria have been established in the setting of the filtering process include:

- a. The topic did relate to mice but not the MICE industry
- b. No free access to the full-text article
- c. The variable only mentions the topic but not the main discussion in the full-text article.
- d. The article was not from the related tourism and hospitality journal.

A total of 505 articles were excluded after the filtering process was carried out, leaving the 20 selected articles that met the final filtering criteria. Figure 1 depicts the data collection and selection flow based on the systematic literature review approach adopted by Sarki and Saad (2018).

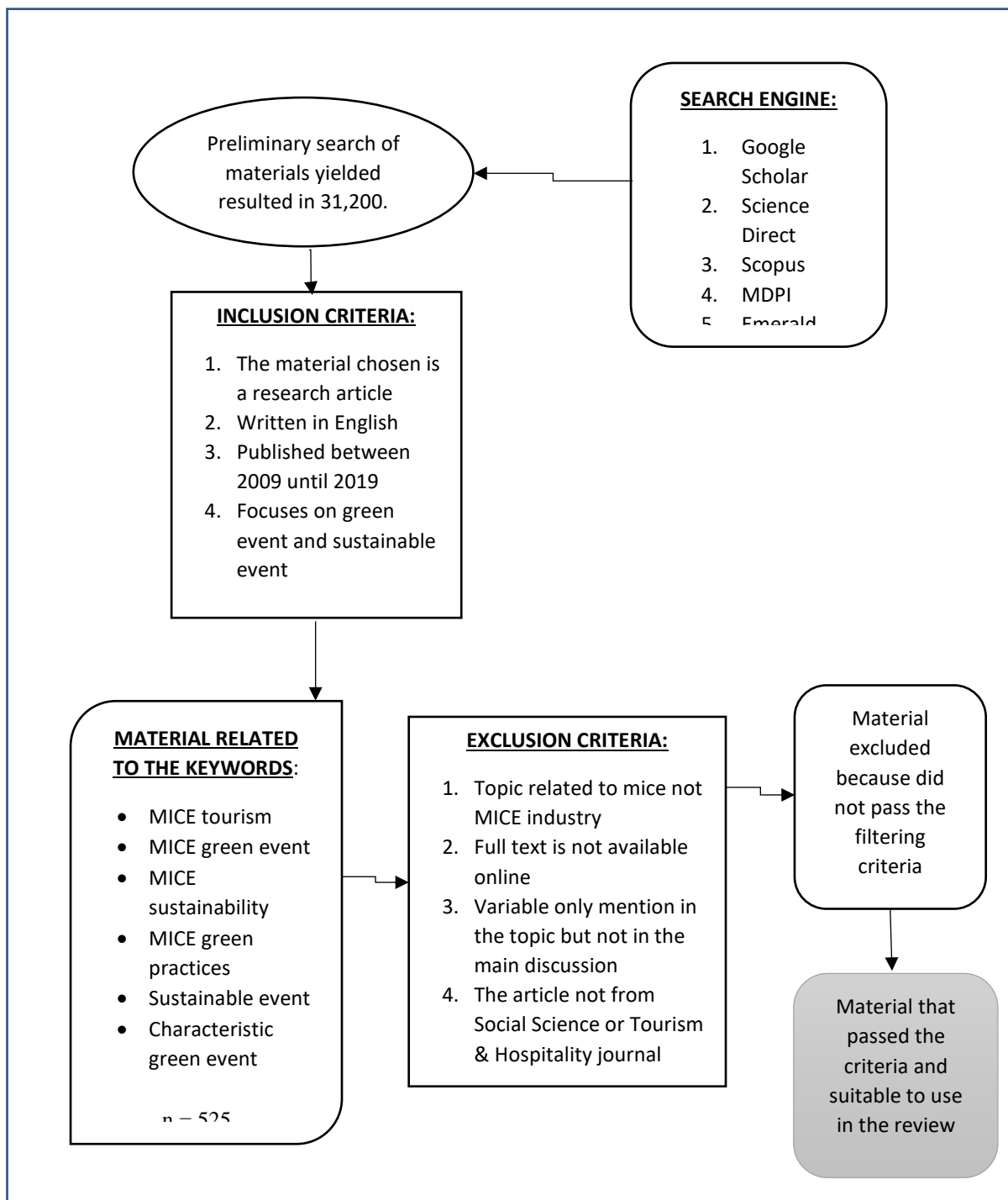


Figure 1: Flowchart for data collection adopted from Sarki and Saad (2018)

After performing the filtering process by using several exclusion criteria to obtain more accurate results, it was found that 20 articles are suitable for the review process. Based on Table 2, it is found that a total of 3 articles each from Journal of Sustainable Tourism (Ranking Q1: Impact Factor 1.730) and Sustainability Journal (Ranking Q1: Impact Factor 0.610) is affecting 15 percent each of the total 20 articles selected. Followed by two articles (10%) from the Journal of Convention and Event Tourism (Ranking Q3: Impact Factor 0.370) and two more articles (10%) from the International Journal of Tourism and Hospitality Research (Ranking Q2: Impact Factor 0.570) are also the primary reference for obtaining study findings. Only 1 article

(5%) from other journals ranking between Q1 to Q3 was also selected as a reference. According to Scimago.com, most of the Symposium and Conference papers are not yet assigned a quartile. However, the content of these articles is useful to be review and used for this study. Table 2 indicates the list of sample distributions used in this study.

Table 2-  
*Distribution of Sample*

	Journal Name	Ranking	Impact Factor	Number of Articles	%
1	Event Management	Q3	0.460 (2020)	1	5
2	Journal Of Human Resources in Hospitality & Tourism	Q2	0.730 (2020)	1	5
3	The 1 <sup>st</sup> International Symposium	*	0	1	5
4	IOP Conference Series Materials Science and Engineering	*	0	1	5
5	International Conference on Hospitality, Tourism & Sort Management	*	0	1	5
6	International Journal of Tourism and Hospitality Research	Q2	0.570 (2020)	2	10
7	Journal of Convention & Event Tourism	Q3	0.370 (2020)	2	10
8	Journal of Sustainable Tourism	Q1	1.730 (2020)	3	15
9	Journal of Hospitality and Tourism Management	Q1	1.310 (2020)	1	5
10	Journal of Hospitality, Leisure, Sport & Tourism Education	Q2	0.470 (2020)	1	5
11	International Journal of Hospitality Management	Q1	2.320 (2020)	1	5
12	Sustainability	Q1	0.610 (2020)	3	15
13	International Journal of Contemporary Hospitality Management	Q1	2.080 (2020)	1	5
14	International Journal of Event and Festival	Q2	0.420 (2020)	1	5

Note: \*Symposium/Conference Paper Not Yet Assigned Quartile in SCIMAGO

Source: <https://www.scimagojr.com/index.php>



Data extraction was established to analyze the content or materials further to identify the focus group of the highly reviewed material. It has a strong connection to the main topic. Using the main keywords in every search engine could aid in developing the chosen material, which had a high degree of similarity to the topic under consideration. The following are the most important keywords:

- a. MICE tourism
- b. MICE green practices
- c. MICE sustainability

Additional keywords consider as secondary keywords include:

- a. MICE green event
- b. Sustainable event
- c. Characteristic green event

Table 3-  
*Selected published articles (2009-2019).*

Database	Year	Journals	Title
Google Scholar	2011	Event Management	Green Business Events: Profiling Through A Case Study
Google Scholar	2017	Journal Of Human Resources in Hospitality & Tourism	Awareness and Implementation of Green Practices in The Meetings-, Incentives-, Conventions-And Exhibitions-(MICE) Industry: The Case of Phuket, Thailand
Google Scholar	2019	The 1 <sup>st</sup> International Symposium	Green Exhibition Practice Approach Based on Circular Economy Theory
Google Scholar	2019	IOP Conference Series Materials Science and Engineering	Green Innovation in Urban Scale: Activation of Small Cities Through Horticultural Exhibitions in Berlin/Brandenburg Metropolitan Region
Google Scholar	2017	International Conference on Hospitality, Tourism & Sort Management	Exploring Malaysian Attendee Attitude Towards Green Practices in Exhibition
Google Scholar	2013	International Journal of Tourism Hospitality and Research	Green Attendees' Evaluation of Green Attributes at The Convention Centre: Using Importance–Performance Analysis
Google Scholar	2011	Journal of Convention & Event Tourism	An Exploratory Study of The Importance of Sustainable Practices in The Meeting and Convention Site Selection Process
Google Scholar	2016	International Journal of Tourism	Engaging Attendees in Environmental Sustainability at Trade Shows: Attendees' Perceptions and Willingness to Participate



		and Hospitality Research	
Google Scholar	2013	Journal Convention Event Tourism	of & Conference Attendees' Perceptions of Sustainable Issues in Convention Centers
Google Scholar	2015	Journal Sustainable Tourism	of Green Events, Value Perceptions, and the Role of Consumer Involvement in Festival Design and Performance
Google Scholar	2012	Journal Sustainable Tourism	of An Examination of Green Intention: The Effect of Environmental Knowledge and Educational Experiences on Meeting Planners' Implementation of Green Meeting Practices
Scopus	2014	Journal Sustainable Tourism	of How the Introduction of Concepts of Energy Saving and Carbon Reduction (ESCR) Can Affect Festival Visitors' Behavioral Intentions: An Investigation Using A Structural Model
ScienceDirect	2019	Journal Hospitality Tourism Management	of and The Effectiveness of Green Advertising in The Convention Industry: An Application of a Dual Coding Approach and The Norm Activation Model
ScienceDirect	2019	Journal Hospitality, Leisure, Sport & Tourism Education,	of Event Sustainable Development in Thailand: A Qualitative Investigation
ScienceDirect	2010	International Journal Hospitality Management	of How Green Was My Festival: Exploring Challenges and Opportunities Associated with Staging Green Events
MDPI	2017	Sustainability	Perceived Attributes of Event Sustainability in The MICE Industry in Thailand: A Viewpoint from Governmental, Academic, Venue and Practitioner
MDPI	2019	Sustainability	Convention Tourism and Sustainability: Exploring Influencing Factors on Delegate Green Behavior That Reduce Environmental Impacts
MDPI	2019	Sustainability	Taiwan's Marketing Strategies for Green Conferences and Exhibitions
Emerald	2017	International Journal Contemporary Hospitality Management	of In Pursuit of An Environmentally Friendly Convention Industry

Emerald	2016	International Journal of Event and Festival	Mega-Event and Urban Sustainable Development
---------	------	---	--

Notes:  $n=20$

Table 3 present the final twenty articles that qualified after the extraction and screening completed. The data analysis used was based on the purpose of the study, which is to identify the characteristic of green practices in MICE tourism. A proper process of analysis was used following the standard steps set for the systematic literature review method. The steps include screening process, inclusion criteria, exclusion criteria, and extraction data for the final selection of materials to be reviewed. Multiple screening processes were run several times to avoid duplication of materials, unreliable data, and irrelevant material regarding the discussing topic. Based on the reviews, findings and conclusions of each material were extracted and grouped according to the characteristics of green practices in MICE tourism. Besides, the attendees' behavior towards sustainability has also been identified. Other important content is also considered. The data has been arranged accordingly to complete the systematic literature review process, as depicted in Figure 1.

## Findings and Discussions

### *Characteristics of Green Practices in MICE Tourism*

Five main characteristics of green practices in MICE tourism have been determined and formulated based on a systematic review of selected 33 articles. This initiative will assist MICE planners in developing and implementing innovative, eco-friendly, and sustainable events. Furthermore, one of the MICE event organizer's key strategies will be to win more bids for hosting mega-events. The main characteristics have been divided according to the following themes.

#### *a. Green Venues*

Aside from adhering to the safety standards set by the local authority, MICE event venues such as exhibition centers and hotel ballrooms must also commit to the community and environmentally friendly projects. This special commitment to environmentally friendly practices can be a promising opportunity for event venues to increase their specialty and potential. According to Buanthong et al. (2017), most clients preferred to hold events or conferences at eco-conscious and environmentally friendly venues. Three items that can be used as a guideline for an event planner or organizer to implement are energy efficiency, recycling, and sustainable policies.

Choosing green venues will reduce environmental impact due to a large number of attendees (Park and Kim, 2017), protect natural resources (Liang, Wang, Tsaur, Yen, and Tu, 2016), and save money. The savings can be used for event sales and marketing (Lee, Barber, and Tyrell, 2013). As a result, the event planner or organizer must have the knowledge and proper skills in planning events with a green intention (Boo et al., 2013). Furthermore, the event planner should schedule a special session to educate attendees on environmental impacts and green practices in MICE exhibitions (Wang and Dai, 2019).

Based on the 13 out of 33 reviewed articles (Table 4), the following are some ideas that the event planner or organizer can use to execute sustainable green functions and green venues:

- i. Practice the paperless events by leveraging the usage of the latest technology, using double-sided printing for meeting materials if required, and bringing their own bottled water to the meeting.
- ii. Energy efficiency by using natural lighting, green roof, solar panels, use renewable energy sources, and use timers or motion sensors for lighting.
- iii. Conducting plastic bag free campaign during the event.
- iv. Initiatives in reusable display products and promotional materials or using recyclable materials for booth decoration.
- v. Wastewater for toilets usage

Table 4:

*Literature Review for Green Venues*

<b>Title of Article</b>	<b>Author (s) / Published Year</b>	<b>Findings</b>
An Examination of Green Intention: The Effect of Environmental Knowledge and Educational Experiences on Meeting Planners' Implementation of Green Meeting Practices	Soyoung Boo, Earang Park (2013)	Choose a meeting location where the service providers and planners practising the eco-friendly system. Knowledge and educational had influence the priority of the organizer in planning green intention in the events.
An Exploratory Study of The Importance of Sustainable Practices in The Meeting and Convention Site Selection Process	Jason Draper, Mary Dawson (2011).	Energy-saving / efficient of lighting and water resources.
An Exploratory Study of Meeting Planners and Conference Attendees' Perceptions of Sustainable Issues in Convention Centers	Carole B. Sox, Stefanie Benjamin, Jason Carpenter, Sandy Strick (2013)	Practice the paperless meetings. Use of natural lighting and save energy using timers or motion sensors.
Exploring the Malaysian Attendee Attitude towards Green Practices in Exhibitions	Kim Hwa Choe (2017)	The venue implements energy efficiency measurement, comply with green building standard and use renewable energy sources.
Green Attendees' Evaluation of Green Attributes at The Convention Centre: Using Importance-Performance Analysis	Woojin Lee, Troy Barber, Timothy Tyrrell (2013)	Convention centre practices the green facilities concept such as using solar panels or green roof. Saving received from implementing green practices, can be used in enhancing the marketing program. Bringing your water-bottle, and paperless agendas.
Perceived Attributes of Event Sustainability in the	Kantapop Buathong, Pei-Chun Lai	Using reusable exhibition materials and promotional tools.

MICE Industry in Thailand: A Viewpoint from Governmental, Academic, Venue and Practitioner	(2017)	Green practices are divided into three categories: (1) recycle and reusable materials; (2) energy efficiency; and (3) sustainable procedures The above items can be a guideline for the planner in implementing the green event.
Taiwan's Marketing Strategies for Green Conferences and Exhibitions	Shao-Ping Wang, Miao-Sheng Chen. Mou-Jian Li (2019)	Water supply, decorations, and the use of recyclable materials at booth décor
In pursuit of an environmentally friendly convention industry: A sustainability framework and guidelines for a green convention	Hyo-Yeun Park, Dae-Kwan Kim (2017)	The "event management" category is the most important factor in having a green event. An eco-friendly venue contributed to reducing the negative impact
Green Business Events: Profiling Through A Case Study	Bill Merrilees, Kathryn Marles (2011)	Provide their members' information regarding environmental impacts, policies, and practices of exhibitions.
Mega-event and urban sustainable development	Ying-Wen Liang Chih-Hung Wang Sheng-Hshiang Tsaur Chang-Hua Yen Jin-Hua Tu (2016)	The findings showed that all aspects that concerned with green practices contributed towards a positive impact on the environment and event sustainability.
Awareness and Implementation of Green Practices in the Meetings-, Incentives-, Conventions- and Exhibitions- (MICE) Industry: The Case of Phuket, Thailand	Florence Anjali Garin, Dr. Tatiyaporn Jarumaneerat (2017)	Waste management and electricity saving are the most important topics in the implementation of green practices.
Green Exhibition Practice Approach Based on Circular Economy Theory	Xifang Wang, Ruijuan Dai (2019)	Establish a green exhibition awareness, and set out to practice, so that green environmental protection implementation can be done.

Note: n=13

#### b. Green Accessibility

As shown in Table 5, green accessibility during the MICE event was discussed in 10 of the 33 articles chosen. When choosing a location or venue, the main factor is dependable public transportation to the event area. Several studies have found that green accessibility may increase event organizers' interest in choosing a location or venue. As a result, the organizers must ensure that the attendees have easy access to the venue. Furthermore, it will lessen the

impact of traffic congestion, air and noise pollution, and greenhouse gas emissions (Laing & Frost, 2010). Some organizers will provide shuttle buses for attendees during their participation in MICE events in areas where the transportation system is underdeveloped (Draper & Dawson, 2011).

According to some articles, attendees could use light rail or train as an alternative mode of transportation to get to MICE events (Lee, Barber & Tyrrell, 2013). Furthermore, introducing new technology at the event may pave the way for a more environmentally friendly method of creating electric or hybrid transportation. Another way to address the issue of public transportation is to encourage attendees to adopt a carpooling habit. A carpool can save money while also protecting the environment from the pollution caused by vehicles (Laing et al., 2010). Simultaneously, the process of developing and improving the public transportation system will improve the city's and region's image concerning MICE events (Popek, 2019).

Table 5-

*Literature Review for Green Accessibility.*

<b>Title of Article</b>	<b>Author (s) / Published Year</b>	<b>Findings</b>
An Exploratory Study of The Importance of Sustainable Practices in The Meeting and Convention Site Selection Process	Jason Draper, Mary Dawson (2011)	Organizing shuttle services such as transportation for participants.
Taiwan's Marketing Strategies for Green Conferences and Exhibitions	Shao-Ping Wang, Miao-Sheng Chen. Mou-Jian Li (2019)	Providing free bus transportation.
Green Events, Value Perceptions, And the Role of Consumer Involvement in Festival Design and Performance	IpKin Anthony Wong, Yim King Penny Wan, Shanshan Qi (2015)	Green environment and activity offer the shuttle bus, public transport availability, green culture entertainment and smoke-free environment.
In pursuit of an environmentally friendly convention industry: A sustainability framework and guidelines for a green convention	Hyo-Yeun Park, Dae-Kwan Kim (2017)	Transportation was included in the seven important guidelines to pursuit the environmentally friendly event.
Perceived Attributes of Event Sustainability in the MICE Industry in Thailand: A Viewpoint from Governmental, Academic, Venue and Practitioner	Kantapop Buathong, Pei-Chun Lai (2017)	Use of electric or hybrid transportation at the event to more environmentally friendly.

How green was my festival: Exploring challenges and opportunities associated with staging green events	Jennifer Laing Warwick Frost (2010)	Consider the issue of accessibility in selecting a location or venue - accessibility to reliable public transport is of increasing interest to event organizers. If not accessible by public transport, can provide shuttle buses or encourage for carpooling. Effect of transport can impact greenhouse gas emission, congestion, noise & deterioration of local air quality.
Green Attendees' Evaluation of Green Attributes at The Convention Centre: Using Importance-Performance Analysis	Woojin Lee, Troy Barber, Timothy Tyrrell (2013)	Convention centre practices the green concept into their facilities include greener transportation alternatives, Alternative transportation such as light rail and train.
Convention Tourism and Sustainability: Exploring Influencing Factors on Delegate Green Behavior That Reduce Environmental Impacts	Heesup Han, Soyeun Lee, Amr Al-Ansi, Hyeon-Cheol Kim, Hyungseo Bobby Ryu, Jinkyung Jenny Kim, Wansoo Kim (2019)	Transportation used to join the event should not contribute to pollution.
How the introduction of concepts of energy-saving and carbon reduction (ESCR) can affect festival visitors' behavioural intentions: an investigation using a structural model	Jeou-Shyan Hornga Meng-Lei Monica Hub Chih-Ching Tengc HanLiang Hsiaod Chang-Yen Tsaie Chih-Hsing Liuf (2014)	The event organizer to consider steps to avoid the carbon emission in making plan for transportation especially in rural area.
Green Innovation in Urban Scale: Activation of Small Cities through Horticultural Exhibitions in Berlin/Brandenburg Metropolitan Region	Agnieszka Wojcik- Popek (2019)	Boosting the image of a region or city by enhancing the public transportation system and developing a new pedestrian and bicycle lane.

Note: n=10

### c. Green Advertising and Promotion

Six of the thirty-three articles reviewed indicated that using green practices in advertising and promotional activities will improve the image of the events. At the same time, it may lower the cost of marketing activities. Several articles stated that any green events should also be

promoted and advertised on the greenway. One concept of green advertising and promotion is digital platforms such as SMS, email, and websites to promote the event and enhance attendees' experience (Kim, 2017). Furthermore, the invitation and registration process should be carried out via an online invitation and registration system. At the same time, the event should be announced via the social media platform. This initiative has the potential to reduce paper waste (Buanthong et al., 2017).

For the green advertising concept, a promotional message that addresses an environmental issue will attract consumers' attention and promote the event organizer's and their eco-friendly events' environmental image (Kim, Malek, and Roberts, 2019). The message could reach the attendees even faster and more conveniently using advanced technological methods. According to the study, paperless advertising reduced some percentages of the cost of marketing activities. Another requirement for organizing MICE events could be reduced by lowering the cost (Lee et al., 2013).

Table 6- Literature review for green advertising and promotion.

<b>Title of Article</b>	<b>Author (s) / Published Year</b>	<b>Findings</b>
The effectiveness of green advertising in the convention industry: An application of dual coding approach and the norm activation model	Woo-Hyuk Kim Kristin Malek Kevin R Roberts (2019)	Green advertising concept is to include a promotional message and play a critical role in delivering the environmental issue to attract consumer and organizers to create an eco-friendly event.
Exploring the Malaysian Attendee Attitude towards Green Practices in Exhibitions	Kim Hwa Choe (2017)	Event's announcement, invitation, registration and communication use electronic devices, online registration system and social media.
Perceived Attributes of Event Sustainability in the MICE Industry in Thailand: A Viewpoint from Governmental, Academic, Venue and Practitioner	Kantapop Buathong, Pei-Chun Lai (2017)	To reduce the number of papers used, using media such as SMS, email and websites.
Taiwan's Marketing Strategies for Green Conferences and Exhibitions	Shao-Ping Wang, Miao-Sheng Chen. Mou-Jian Li (2019)	LED signs are replacing traditional posters at convention venues
In pursuit of an environmentally friendly convention industry: A sustainability framework and guidelines for a green convention	Hyo-Yeun Park, Dae-Kwan Kim (2017)	Marketing and communication are guidelines included in the seven important categories to pursue the green events.



Green Attendees' Evaluation of Green Attributes at The Convention Centre: Using Importance–Performance Analysis	Woojin Lee, Troy Barber, Timothy Tyrrell (2013)	Green practices saved the activities of sales and marketing from overspending.
---	---	--

Note: n=6

The six articles presented in Table 6 summarized the main issues related to the event organizers' green advertising and promotions activities.

d. *Green Food and Beverages*

Consumers are now more conscious and responsible for their food, and the suppliers are more conscious of selling sustainable goods to the community. In the MICE industry, the function of the appointed caterers is not limited to preparing and serving the food to the attendees but also responsible for supporting the environmental image of the organizer and their eco-friendly events (Lee et al., 2013). Therefore, they should know green practices in planning the meals for the event attendees as a green event has always been associated with green food (Wong et al., 2015). Some ideas raised by scholars on green food and beverages are that the food is locally grown or produced and provides organic and vegetarian options (Lee et al., 2013). Besides, for a big event, it is appropriate for the organizer to choose buffet-style menus served in bulk dispensers rather than using styrofoam that is difficult to recycle. Table 7 summarized the three articles' findings on green food and beverages practiced by event organizers.

Table 7-

*Literature Review for Green Food and Beverages.*

Title of Article	Author (s) / Published Year	Findings
An Exploratory Study of Meeting Planners and Conference Attendees' Perceptions of Sustainable Issues in Convention Centers	Carole B. Sox, Stefanie Benjamin, Jason Carpenter, Sandy Strick (2013)	Provide alternative water bottles and offer locally sourced food. Eliminate the use of styrofoam and others that are difficult to recycle.
Green Events, Value Perceptions, And the Role Consumer Involvement in Festival Design And Performance	IpKin Anthony Wong, Yim King Penny Wan, Shanshan Qi (2015)	Friendlier green food means locally produced food, organic food as well as vegetarian food.
Green Attendees' Evaluation of Green Attributes at The Convention Centre: Using Importance–Performance Analysis	Woojin Lee, Troy Barber, Timothy Tyrrell (2013)	Action taking by using a buffet style of menu and donate the leftover food. Using a vendor that adapts a locally grown food while purchasing the foods.

Note: n=3

e. *Green Waste Management*

Waste management in MICE typically focuses on the procedure from trash removal to event waste management. Several studies have emphasized this characteristic. According to a study conducted by Buathong and Lai (2019), waste management could be garbage screening. Any waste that can be reused, recycled, or sold is separated. The proceeds from the sale of items can be used to keep the event's destination or venue in good condition. Furthermore, providing incentives or tokens to people who recycle their waste, such as plastic bottles and aluminum cans, would raise awareness about green practices and ensure waste management effectiveness (Laing et al., 2010). Besides, a study conducted by Jung et al. (2016) claimed attendees had positive perceptions of sustainability if three leading green practices, namely water conservation, recycling bins, and the use of reusable items for food and beverage such as biodegradable products, were implemented in trade shows.

Waste management is concerned with waste such as garbage and rubbish and how to manage leftover food from an event. There are several methods for managing food waste, including donating leftover food to charities (Laing et al., 2010), developing policies for donating leftover food and engaging with food suppliers, collecting food waste for composting and separating food with organic ingredients (Draper & Dawson, 2011). The summarized findings from four articles reviewed for the green waste management theme are depicted in Table 8.

Table 8:

*Literature Review for Green Waste Management.*

<b>Title of Article</b>	<b>Author (s) / Published Year</b>	<b>Findings</b>
Event sustainable development in Thailand: A qualitative investigation	Kantapop Buathonga, Pei-Chun Lai (2019)	Waste management or garbage screening is a process to segregate reuse, recycle and sell items. The collected money will be used for the company's maintenance.
How green was my festival: Exploring challenges and opportunities associated with staging green events	Jennifer Laing Warwick Frost (2010)	Provide incentives for recycling at an on-site recycling center. Exchange plastic bottle and aluminum cans for merchandise such as t-shirt Excess food can be offered to charities (food bank).
Engaging Attendees in Environmental Sustainability at Trade Shows: Attendees' Perceptions and Willingness to Participate.	Shinyong Jung, Yen-Soon Kim, Kristin Malek, Woojin Lee (2016)	Three main factors of green practices in trade shows include water conservation, recycling bin availability, and biodegradable reusable items used for food and beverage.
Green Events, Value Perceptions, And the Role Consumer Involvement in Festival Design And Performance	IpKin Anthony Wong, Yim King Penny Wan, Shanshan Qi (2015)	Green design and waste management in term of reusable dishes and flatware; bring own utensils; offer the green-related

		theme and simple décor to reduce necessity.
--	--	---

Note: n=4

### Challenges and Future Research

Based on the article reviewed, three main challenges were identified regarding implementing green practices in MICE tourism. The challenges with the proposed solutions are listed below:

1. There is a disconnection between green intentions and operational practices due to a lack of knowledge and experience in handling green events. Furthermore, some planners lack understanding and awareness of the benefits of conducting green MICE events (Laing et al., 2010). One good example is when the event organizer encouraged recycling by introducing recycling bins so the attendees can segregate their rubbish accordingly. However, the caterer has put their food waste and rubbish into one bin. The objectives of the event were not met. Therefore, environmental education or training for the event planners and staff involved indirectly in the event is necessary. The program will build more knowledge and follow environmentally-friendly practices (Boo et al., 2013).

2. The venue management and the organizer may require additional costs associated with implementing the environmental management system and purchasing environmentally friendly supplies and products.

Hence, environmental audits were used to monitor progress to ensure the green objectives or goals were achieved. Through audit exercise, the event organizer can detect whether they met the industry benchmarks or sought accreditation. Green accreditation, such as conference venues with accreditation or certification, can be used as a marketing tool (Laing et al., 2010). Awards connected to the green initiatives can be introduced where the judging will be based on environmental auditors such as event management, carbon emissions and recycling effort (Buathong et al., 2019).

3. Negative publicity by travel advisories and media on political instability and terrorism in the country will make the destination less attractive as it involves the safety and security of the delegates while attending the event (Bathing et al., 2019).

The affected country should launch the "Green Meetings Campaign" to divert their negative perception of the destination by promoting environmental responsibility. A marketing campaign can also act as an ideal provider that offers a unique event, environmentally responsible and representative of local culture and hospitality to attract the overseas MICE business to create and organize their future events.

Based on the findings of this systematic review, it is suggested that future research be conducted to investigate green tourists' perceptions of factors that will inspire and motivate them to participate before deciding to participate in the events and their level of satisfaction after participation. Additional research could look into the impact of green event practises on MICE attendees and tourism destinations. A comprehensive approach to investigating the long-term effects of MICE green event practises to reduce climate change and align with the SDGs would benefit the MICE tourism sector globally.

### Conclusion

The MICE segment has grown steadily, becoming the fastest-growing segment and a significant contributor to the global tourism industry, where demand continues to rise. Furthermore, increased awareness of green practices among MICE event attendees and stakeholders has changed MICE event organizers' perception of being environmentally

friendly. The characteristics of green practice in MICE tourism were discussed in this study. The data gathered for the 20 selected articles was based on the perceptions and feedback of the participants and stakeholders. Based on the systematic review analysis results, it is possible to conclude that the study's objective was met, as the five main characteristics of green practice in MICE tourism were successfully determined and formulated. Green venues, green accessibility, green advertising and promotion, green food and beverages, and green waste management are among the characteristics that have been identified. This initiative would assist MICE planners, particularly new entrants, in developing and executing an innovative, eco-friendly, and sustainable event at their location. The primary strategies will be to win more bids for mega-events and promote a country as a green MICE destination. This study can also be used as a proper guideline by government bodies and associations when developing policies and regulations on green practices in MICE tourism.

## References

- Aronsson, L. (2000). *The development of sustainable tourism*. London and New York: NY: Continuum.
- Boo, S., & Park, E. (2013). An Examination of Green Intention: The Effect of Environmental Knowledge and Educational Experiences on Meeting Planners' Implementation of Green Meeting Practices. *Journal of Sustainable Tourism*, 21(8), 1129 – 1147.
- Buanthong, K., & Lai, P. (2019). Event sustainable development in Thailand: A qualitative investigation. *Journal of Hospitality, Leisure, Sport & Tourism Education* 24(2019). 110-119
- Buanthong, K., & Lai, P. C. (2017). Perceived Attributes of Event Sustainability in the MICE Industry in Thailand: A Viewpoint from Governmental, Academic, Venue and Practitioner. *Sustainability*, 2017(9), 2 – 20
- Business Events Australia. (2008). Corporate Social Responsibility Fact Sheet
- Davis, J. (1993). Strategies for environmental advertising. *Journal of Consumer Marketing*, 10(2), 19–36.
- DeSilets, L. D., & Dickerson, P. S. (2008). Green meetings: Hosting environmentally friendly events. *The Journal of Continuing Education in Nursing*, 39 (9): 388 - 389.
- Dickson, C., & Arcodia, C. (2010). Promoting sustainable event practice: The role of professional associations. *International Journal of Hospitality Management*, 29, 236–244.
- Draper, J., & Dawson, M. (2011). An Exploratory Study of The Importance of Sustainable Practices in The Meeting and Convention Site Selection Process. *Journal of Convention & Event Tourism*, 12(2011), 153 – 178.
- Dwyer, L., & Forsyth, P. J. (1996). Economic impacts of cruise tourism in Australia. *Journal of Tourism Studies*, 7(2), 36-43.
- Font, X., & Harris, C. (2004). Rethinking standards from green to sustainable. *Annals of Tourism Research*, 31(4), 986-1007.
- Garin, F. A., & Jarumaneerat, T. (2017). Awareness and Implementation of Green Practices in the Meetings-, Incentives-, Conventions-and Exhibitions-(MICE) Industry: The Case of Phuket, Thailand. Organized by Dusit Thani College 29 November–2 December 2017 Bangkok, Thailand, 16.
- Gecker, R. (2009). How companies that are cutting back keep their meeting green. Retrieved from: [http://meetingsnet.com/checklistshowto/green\\_meetings/0701-companies-managingbudgetcuts/](http://meetingsnet.com/checklistshowto/green_meetings/0701-companies-managingbudgetcuts/)

- Getz, D. (2008). Event tourism: Definition, evolution, and research. *Tourism management*, 29(3), 403-428.
- Getz, D. (2009). Policy for sustainable and responsible festivals and events: Institutionalization of a new paradigm. *Journal of Policy Research in Tourism, Leisure and Events*, 1(1), 61-78
- Hamid, M., & Ismail, N., & Fuza, Z., & Ahmad, K. (2012). Sustainable tourism development practices of MICE venue provider in East Coast Region, Peninsula Malaysia. *Current Issues in Hospitality and Tourism Research and Innovations*.
- Han, H., Lee, S., Al-Ansi, A., Kim, H. C., Ryu, H. B., Kim, J. J. K., & Kim, W. (2019). Convention Tourism and Sustainability: Exploring Influencing Factors on Delegate Green Behavior That Reduce Environmental Impacts. *Sustainability*, 2019(11), 1 – 14
- Holleran, J. N. (2008). Sustainability in tourism destinations: Exploring the boundaries of eco-efficiency and green communications. *Journal of Hospitality & Leisure Marketing*, 17(3–4), 373–394.
- Hong, J. S., Monica Hu, M. L., Teng, C. C., Hsiao, H. L., Tsai, C. Y., & Liu, C. H. (2014). How the introduction of concepts of energy saving and carbon reduction (ESCR) can affect festival visitors' behavioural intentions: An investigation using a structural model. *Journal of Sustainable Tourism*, 22(8), 1216-1235.
- International Meeting Statistics of the Union of International Associations (UIA). (2012). International Meeting Statistics for the Year 2011—Press Release; UIA: Paris, France.
- International Trade Centre. (2017). The state of sustainable markets 2017: Statistics and emerging trends. Retrieved from: <http://www.intracen.org/publication/The-State-of-Sustainable-Markets-2017-Statistics-and-Emerging-Trends>.
- Jung, S., Kim, Y., Malek, K., & Lee, W. (2016). Engaging Attendees in Environmental Sustainability at Trade Shows: Attendees' Perceptions and Willingness to Participate. *An International Journal of Tourism and Hospitality Research*, 27(4), 540 – 542.
- Kim, H. C. (2017). Exploring the Malaysian Attendee Attitude towards Green Practices in Exhibitions. *Hospitality, Tourism and Sport Management*, 1(2017), 78 – 92.
- Kim, S., Lee, K., & Fairhurst, A. (2017). The review of “green” research in hospitality, 2000-2014: Current trends and future research directions. *International Journal of Contemporary Hospitality Management*, 29(1), 226–247.
- Kim, W., Malek, K., & Roberts, K. R. (2019). The effectiveness of green advertising in the convention industry: An application of a dual coding approach and the norm activation model. *Journal of Hospitality and Tourism Management*, 39, 185-192
- Kornegay, J. (2011). Seven trends for sustainable meetings. *Convention South (April)*.
- Laing, J., & Frost, W. (2010). How green was my festival: Exploring challenges and opportunities associated with staging green events. *International Journal of Hospitality Management*, 29(2), 261-267.
- Lee, W., Barber, T., & Tyrrell, T. (2013). Green Attendees' Evaluation of Green Attributes at The Convention Centre: Using Importance–Performance Analysis. *An International Journal of Tourism and Hospitality Research*, 24(2), 221 – 240.
- Liang, Y., Wang, C., Tsaur, S., Yen, C and Tu, J (2016). Mega-event and urban sustainable development. *International Journal of Event and Festival Management*, 7(3). 152-171
- Macbeth, J., Carson, D., & Northcote, J. (2004). Social capital, tourism and regional development: SPCC as a basis for innovation and sustainability. *Current issues in tourism*, 7(6), 502-522

- Mair, J., & Laing, J. (2012). The greening of music festivals: Motivations, barriers and outcomes. Applying the Mair and Jago model. *Journal of Sustainable Tourism*, 20(5), 683–700.
- Merrilees, B., & Marles, K. (2011). Green business events: profiling through a case study. *Event Management*, 15(4), 361-372
- Modica, P. D., Altinay, L., Farmaki, A., Gursoy, D., & Zenga, M. (2018). Consumer perceptions towards sustainable supply chain practices in the hospitality industry. *Current Issues in Tourism*. Retrieved from: <https://doi.org/10.1080/13683500.2018.1526258>.
- Moise, D., & Macovei, O. I. (2014). Green Events-The New Responsibility of the Organizations. *Romanian Journal of Marketing*, (3)
- Papadas, K. K., Avlonitis, G. J., & Carrigan, M. (2017). Green marketing orientation: Conceptualization, scale development and validation. *Journal of Business Research*, 80, 236–246.
- Park, H., & Kim, D. (2017). In pursuit of an environmentally friendly convention industry: A sustainability framework and guidelines for a green convention. *International Journal of Contemporary Hospitality Management*, 29(3).
- Rittichainuwat, B., & Mair, J. (2012). An exploratory study of attendee perceptions of green meetings. *Journal of Convention & Event Tourism*, 13(3), 147–158. <https://doi.org/10.1080/15470148.2012.706786>
- Sarki, Z., & Saad, G. A. M. (2018). Preparedness and Challenges of Police in Using Forensic Science: A Review of Some Related Literature. *Journal of Social Sciences and Humanities*, 2, 14-24.
- Shen, L., Si, H. C., Yu, L., & Si, H. (2019). Factors influencing young people's intention toward municipal solid waste sorting. *International Journal of Environment Res. Public Health* (16), 1708.
- Singapore Tourism Board (STB). (2013). Sustainability Guidelines for the Singapore MICE Industry; STB: Ayala Avenue, Philippines, p. 32.
- Sox, C., Benjamin, S., Carpenter, J., & Strick, S. (2013). An Exploratory Study of Meeting Planners and Conference Attendees' Perceptions of Sustainable Issues in Convention Centers. *Journal of Convention & Event Tourism*, 14, 144 – 161.
- The World Commission on Environment and Development (WCED). (1987). *Our common future*. Oxford: Oxford University Press.
- Wang, S. P., Chen, M. S., & Li, M. J. (2019). Taiwan's Marketing Strategies for Green Conferences and Exhibitions. *Sustainability*, 2019(11), 1 – 20
- Wang, X., & Dai, R. (2019). Green Exhibition Practice Approach Based on Circular Economy Theory. In *Proceedings of the The First International Symposium on Management and Social Sciences (ISMSS 2019), Wuhan, China* (pp. 13-14).
- Popek, A. W. (2019). Green Innovation in Urban Scale: Activation of Small Cities through Horticultural Exhibitions in Berlin/Brandenburg Metropolitan Region. In *IOP Conference Series: Materials Science and Engineering* (Vol. 471, No. 11, p. 112100). IOP Publishing.
- Wong, I. A., Wan, Y. K. P., & Qi, S. (2015). Green Events, Value Perceptions, And the Role of Consumer Involvement in Festival Design and Performance. *Journal of Sustainable Tourism*, 23(2), 294 – 315.
- World Health Organization (WHO). United Nations Environment Programme (UNEP) (2008) New and emerging environmental threats to human health. IMCHE/1/CP6
- Wu, H., Cheng, C., & Hong, W. (2017). An empirical analysis of green convention attendees' switching intentions. *Journal of Convention & Event Tourism*, 18(3), 159–190.