

# Implementation of Environmental Sustainability into Event Management

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**Abstract**—The world population is rapidly growing. In the last few decades, environmental protection and climate change have been remarked as a global concern. All events have their own ecological footprint. Therefore, all participants who take part in the events, from event organizer to audience should be responsible for reducing carbon emissions. Currently, there is a literature gap which investigates the relationship between events and environment. Hence, this study is conducted to investigate how to implement environmental sustainability in the event management. Therefore, a wide literature and also the UK festivals database have been investigated. Finally, environmental effects and the solution of reducing impacts at events were discussed.

**Keywords**—Ecological footprint, environmental sustainability, events, sustainability

## I. INTRODUCTION

RECENTLY, events have become increasingly popular and as the festival options have increased, events have begun to be preferred by more audiences. In the United Kingdom, the statistics showed that an estimated 2.8 million people attended music festivals in 2012; it was 3.5 million people in 2014 and 3.7 million people in 2015 who attended music festivals. There is an increase of 32% of visitors between 2012 and 2015 [1].

Sziget Festival is one of the biggest festivals in Europe concerning the number of participants; it exists since 1993 in Budapest. Sziget Festival originally started as a student Festival and became famous in few years. In first year of Sziget Festival, 1993, a total of 43.000 people attended the festival; in following year, numbers of attendance increased three times with 143.000 participants. Since then, it has rapidly grown. In 2016, the research showed that the number of people in Sziget Festival was 496.000 and 25% of the Sziget passes were sold within 24 hours [2].

In 1990s, awareness of event studies was raised by many academicians accompanying Getz's book *Festivals, Special Events, and Tourism* (1991) [3] and Goldblatt's book *Special Events: The Art and Science of Celebration* (1990) [4] was published which are milestones of event studies.

Getz remarks that planned events are social activities which are organized to bring people together and events without people are not possible to imagine. Planned events have labels and descriptive terms which show particular purposes, contents and programs to give people a view of what events mean [5].

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This paper focuses on environmental sustainability of events which have been examined less than social and economic impacts of sustainability. The main purpose of this research is to analyze the methods of environmental implementation into events.

## II. LITERATURE REVIEW

### A. Events and Sustainability

Visitors are given unique experiences by participating festivals and special events [6]. According to Goldblatt [7] an event is 'a unique moment in time celebrated with ceremony and ritual to satisfy specific needs' and Douglas et al. [8] define festivals and events as an social event for people to come together to celebrate, to demonstrate, to worship, to honor, to remember, to socialize...'. Events play crucial role to celebrate culture, traditions, lifestyle, craft, art, food, music and strengthen the bonds between people. According to Esu and Arrey [9], the purpose of events and festivals is to bring cultural characteristic and wealth to people. Getz [10] defines that 'Festivals are the themed public celebrations which are held annually in the same location or regularly in different places to celebrate culture, belief, commodity, or local identity'.

Goldblatt [11] proposes that celebration, education, marketing and reunion are essential four purposes of events. In recent times, the increased popularity of events has led to different types of event classifications. Events are categorized with 10 types of 'subfields' by Goldblatt [11]: civic events, expositions/exhibitions, fairs and festivals, hallmark events, hospitality, meeting and conferences, retail events, social life-cycle events, sports events, tourism. Content, location, scope, size and importance are the most significant criteria to classify the events [12].

TABLE I  
A TYPOLOGY OF PLANNED EVENTS [13]

Cultural Celebrations	Arts and Entertainments	Private Events	Sport Competitions
Festivals	Concert	Weddings	Amateur/Professional
Carnivals	Award Ceremonies	Parties	Spectator/Participant
Commemorations		Socials	
Religious Events			
Political and State	Educational and Scientific	Business and Trade	Recreational
Summits	Conferences	Meetings, Conventions	Sport and Games for fun
Royal occasions	Seminars	Consumer and Trade Shows	
Political events	Clinics	Fairs	
VIP visits		Markets	

Getz [13] classifies planned events into eight major types. Cultural celebration, arts and entertainment, private events, sport competitions, political and state, educational and scientific, business and trade and recreational events are major types of planned events which have several subtypes (Fig. 1).

Jones [14] highlighted that regardless of the number of the participants, sustainability should be considered in all types of celebrations, rituals, balls, fairs, festivals from large scale to small scale events which bring people together for a purpose.

Events have significant positive and negative impacts such as economic, environmental and social. Environmental sustainability and responsibility has become a significant component of event sector. Since research on events and festivals is highlighted, the focus of event research has been set on economic, social and cultural impacts of events [15] [16]. Getz [10] indicates the paucity of research and articles on environmental impacts of events.

Over the last decades sustainability has been significantly considered by companies and academicians. After Our Common Future is introduced by the United Nations World Commission for Environment and Development in 1987, also known as the Brundtland Report, all major sectors of the economy accepted and promoted this report as a social concern [17].

The concept of sustainability is described as "... development that meets the needs of the present without compromising the ability of future generations to meet their own needs" on Our Common Future Report also known as Brundtland Report of World Commission on Economic Development, led by Gro Harlem Brundtland [17]. The concept of 'needs' emphasizes to achieve primary needs of the World's poor and the idea of limitations require the restriction by the state of technology and social organization. It has two key concepts:

1. The concept of 'needs', in particular the essential needs of the world's poor, to which overriding priority should be given; and,
2. The idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs..." [17].

The United Nations agreed on 17 Sustainable Development goals involving 169 targets. The publishing Agenda is named Transforming our World: The 2030 Agenda for Sustainable Development written in 2015, which is planned to be achieved until 2030, is a plan of action for humanity and the planet [18]. In 15 years, each goal with particular targets is planned to be obtained. This extensive and universal agenda was accepted by all countries and the three dimensions of sustainable development should be considered together to reach the goals. The goals and targets of the United Nations involve to end poverty and hunger, which are all over the World, protect human rights, improve gender equality empowerment of the women and girls, preserve natural resources, provide peaceful societies within and among the countries. Governments, the private sector and civil society have an important role to achieve the goals for a sustainable future. The significant 17 goals to be reached are determined:

1. No Poverty
2. Zero Hunger
3. Good Health and Well-Being
4. Quality Education
5. Gender Equality
6. Clean Water and Sanitation
7. Affordable and Clean Energy
8. Decent Work and Economic Growth
9. Industry, Innovation and Infrastructure
10. Reduced Inequalities
11. Sustainable Cities and Communities
12. Responsible Consumption and Production
13. Climate Action
14. Life Below Water
15. Life on Land
16. Peace, Justice and Strong Institutions
17. Partnerships for the Goals

In 1972, the necessity of accepting human development and environmental protection together was realized at Stockholm Conference on Environment and Development. Hart pointed out environmental problems with "Beyond Greening: Strategies for a Sustainable World" in 1997 [19].

As a result of events, there can be negative effects on air, water, soil, natural resources and people, as well as positive socio-economic effects of events. The environment can be adversely affected by many people coming together. These potential negative impacts could have also effects far beyond where event takes place.

Awareness of environmental protection and sustainable practices on festivals has become a crucial topic for audience and organizers. If event organizers consider sustainability and take responsibility about sustainable event planning, they can minimize the negative impacts of the events. Therefore, it is possible to avoid negative effects by pre-existing actions. Moreover, these actions may influence positively and inspire the participants for living more sustainable.

As festivals and events have developed considerably popular, attention was drawn to waste generation, energy consumption, transportations of audience, artists, equipment and suppliers which affect environmental sustainability. Sustainability is a process which takes time and cannot happen with one event. Also by time event planners will learn from experience and each other.

### *B. Related Works*

In the last few decades, sustainability and events have been investigated by academicians. As mentioned above, Getz [3] and Goldblatt [4] are the leading researchers who started publishing their enlightening books about event studies in the 1990s. Hallmark events have been investigated by Hall [20] and Ritchie et al. [21]. Economic, tourism and commercial, physical, sociocultural, psychological and political positive and negative impacts of hallmark events are purposed to explore on the destination area by Ritchie. Sustainable mega events within three concepts of sustainability involving economic, balanced and steady-state approach are examined by Hall in 2012 [22].

The social and economic impacts of events have been considered more than environmental impacts of events. Gursoy et al. [23] purpose is to examine the perception of socio-economic impacts on host communities. At the end of this study, a measurement instrument is developed that 12 items can measure four domains which are already chosen. In 2016, Yolal et al. [24] also explored how the local's participation may impact their well-being and their life standards. In following article, the importance of measuring the effects of events within particularly social and environmental issues is published in 2005 by Wood [15].

Gibson and Wong [25] research on greening rural festivals within the context of environmental sustainability and discuss the understanding of green festivals. The study of Musgrave [26] attempts to demonstrate how to manage responsible and sustainable events.

### C. Environmental Sustainability

In 1950, the number of world's population was 2.5 billion, while today it is approximately 7.5 billion. In 2050, estimated number of population is 9.7 billion [27]. Environmental sustainability has become increasingly sensitive topic since climate change and global warming became major threats. The increase in the number of events undoubtedly affects the environment negatively. As a result of human activities, greenhouse gas emissions have risen 70% between 1970 and 2004. The warming of the atmosphere, the rise in the sea level, the aridity and unsettled weather etc. are caused by the increase of greenhouse gas emission [28].

The terms of 'greening', 'sustainable event', 'corporate social responsibility', 'triple bottom line' and 'ecological footprint' ... are relevant to sustainability [5].

With the increase in the numbers of events, it became clear that professional event managers need to manage and organize events in order to consider stakeholder's needs and future of events [12]. Despite that many events are organized successfully by devoted volunteers, an increasing competition among all types of events worldwide gives acceleration to design perfectly professionalized events. This indicates that event managers need to be well educated and experienced in order to take part in this competition [12]. Educated and experienced event managers seek guidance and support from varied stakeholder groups concerning environmentally responsible events. Dickson and Arcodia [29] specified these stakeholder groups such as government, non-government organizations (NGO's), professional associations, the host community and sponsors.

Gibson and Wong [25] refer that people, cars, noise and waste generation coming together through the festivals cause an environmental impact. Getz [5] questions the behavior of visitors during the events on-site and in the area, also he suggests to educate visitors on environmental and social responsibility in order to prevent negative impacts.

Getz [5] emphasizes that some or all of the following criteria are not applied by a lot of events:

- Minimization of waste, energy consumption and pollution,

- Keeping private travel to a minimum
- Protecting resources for the future,
- Fostering a positive environmental attitude,
- Reusing facilities; not building needless infrastructure;
- Avoiding damage to wildlife habitat and ecological system.

### D. Ecological Footprint

Measuring the environmental impacts is provided by ecological footprint which was developed by Wackernagel and Rees [30]. Ecological footprint analysis measures the resource consumption and waste generation by a given population in land to enable to reduce human impact on the earth. If there will be 9.7 billion people by 2050 as estimated, ecologically productive land will be less than 0.9 hectares per person [30].

Measured global average carbon footprint is 4 tons per person and varies by country, however, experts point out that 2 tons per person limit should not be exceeded. It has been researched that approximately %45 of individual's carbon footprint is provided by personal activities. Actions which are taken by individuals greatly contribute to reach specified goals. At this point, it is required to assume the responsibility of the individual to reduce carbon footprint [31].

Preventable energy consumption causes negative environmental effects. Approximately 85% of world energy use of fossil oil consumption is associated with carbon emissions [32]. Transportation provides greatest contribution to carbon footprint in festivals. Festivals should encourage their visitors to car sharing and bus or shuttle using to reach the festival area. Another concern is water consumption. Water is an essential resource for human life. Due to scarcity in many regions, the importance of water use should be recognized [33].

### E. UK Festivals

There is a considerable increase in variety and size of British festivals which presents many options, from outdoor rock to folk music events, for event goers. United Kingdom hosted enormous festivals since 1960s [28]. Up to the present, British festivals have been leading and discovering the current political and environmental issues and, new art and music images [28].

Anderton [34] notified that, between 2003 and 2007, there was a remarkable growth of the number of outdoor rock and pop music festivals with 71%. Anderton [34] summarizes the history of British music festivals from mid-1960s to the mid-1990s. Richardson [35] reports that more than 70 music festivals in Britain were held in 2010. The concept of the sustainability was considered after late 90s in the UK. UK festivals consider sustainability performance evaluation. Therefore, Julie's Bicycle organization was established in order to measure carbon management and sustainable development in UK's festivals. Moreover, the survey on audience in UK shows that festivalgoers consider environmental sustainability [28].

'The Show Must Go On' report which was written by Powerful Thinking submits that the most effective way to

communicate about environmental issues like climate change and global warming is festivals [28]. The Show Must Go On report on environmental impact of UK festivals was collected from 273 UK festivals in 2014. The report states that total annual fuel consumption for UK music festivals is 4.96 million liters and fuel consumption per audience per day is 0.6 liters. It is decided to use renewable energy such as solar, wind, kinetic power and sustainable biofuels and to reduce energy demand by using energy efficient equipment.

Average carbon footprint of UK festivals with audience travel consists of 7% of waste, 13% of energy, and 80% of audience travel. 7% of waste, 13% of energy, 80% audience travel show average carbon footprint of UK festivals with audience travel. The most preferred travel type is car with 61% by audience. UK festivals aim is to reduce car travel, encourage for public transport or dedicated coaches. 23500 tons of waste is generated, 2.8 kg waste per person per day. 32% of average recycling rate is under the national household recycling rates. According to the Waste Regulations [36], particular bins should be provided to separate cans, plastics, paper and glass by waste collectors. Furthermore, the culture of leaving tents after festivals became a crucial issue. Adopting reusable materials as reusable cups and increasing recycling and compost rates decrease waste generation. As a result, UK festivals targets to reduce 50% festival related greenhouse gas emissions until 2025 [28].

### III. CONCLUSION

To reduce and prevent negative environmental impacts, event organizers and stakeholders must be responsible of the environment. Events must clarify and highlight their specific goals of environmental responsibility to increase awareness for all participants. In conclusion, the goals of environmental sustainability might be classified essential targets and these targets should be considered by all kind of participants including organizers, audience, artists and suppliers. These essential targets are to minimize the ecological footprint, to aim zero waste and to reduce material consumption at events. Using renewable energy and resource efficient transportation or sharing car, working with sustainable stakeholders, providing local products and food are the key factors to reach these targets. We must use all opportunities that we have today to change the world whereas still exists.

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