

PAPER • OPEN ACCESS

## Research on Sustainable Development of Event Tourism under Environment-friendly growing path

To cite this article: Nan Ding *et al* 2019 *IOP Conf. Ser.: Earth Environ. Sci.* **300** 032037

View the [article online](#) for updates and enhancements.

# Research on Sustainable Development of Event Tourism under Environment-friendly growing path

Nan Ding\*, Xue Mi and Lei Zhao

College of Tourism, Huangshan University, Huangshan, China.

\*Corresponding author e-mail: [hsudingnan@163.com](mailto:hsudingnan@163.com)

**Abstract.** This paper analysed environment problems of event tourism what affects the surroundings directly and then studied the corresponding measures by adopting theories and methods of environment sciences. Sustainable development of event tourism was studied by analyzing the system of event tourism. The results showed that there are three different levels of event tourism in Chinese scenic spot with nine major ecological negative impact areas including solid pollutants, light pollution, etc. The disposal of consumables and tourists' garbage were identified as most serious impact to environment in the whole event tourism in China. Some advices and measures including enhancing the development of sustainable module building materials, optimizing waste treatment system on-site to improve the growing path of event tourism industry and solve the ecological problems in different stages of it.

## 1. Introduction

With the development of China's tourism industry, the competition between tourist attractions has become increasingly fierce. According to incomplete statistics, by the end of 2017, there have been more than 7,000 Class A scenic spots nationwide, including more than 250 5A-level scenic spots. In order to achieve the purpose of scenic spot marketing, event activities are chosen as a carrier to promote tourism.

Western scholars often combine festivals, special events, and Mega-events as a whole. In English, they are referred to as FSE (Festival & Special Event), and Chinese translations are "festivals and special events, referred to as "event" [1]. Event activities include: festivals, celebrations, local specialty products exhibitions, trade fairs, fairs, conferences, and various cultural and sports events. In the tourism industry, the festival activities are one of the means of marketing and propaganda in the scenic spot. The festival with certain scale and influence can become a tourist attraction and can bring huge tourism benefits.

Dr. Dai Guangquan believes that many marketing organizations of enterprises, associations and tourist destinations now use some activities and programs as catalysts for the image of tourist attraction and other development projects, or for the purpose of injecting new vitality into existing attractions with the development of the system, planning and marketing of activities. Which is named the festival tourism [2], with the activities as the carrier to serve the tourism attraction.

Domestic scholars have relatively few researches on the ecological environment of event tourism. More research starts with the convention and exhibition industry, discusses the impact of convention and exhibition industry on the ecological environment, and the path and measures for the development of sustainable exhibition industry or "green exhibition industry". Most scholars believe that from the perspective of "green exhibition" and "ecological exhibition", it proposes ways to improve the design,



management and government regulation of exhibition halls and exhibitions to promote the greening and ecologicalization of China's exhibitions, thereby reducing the environmental pollution of the exhibition industry.

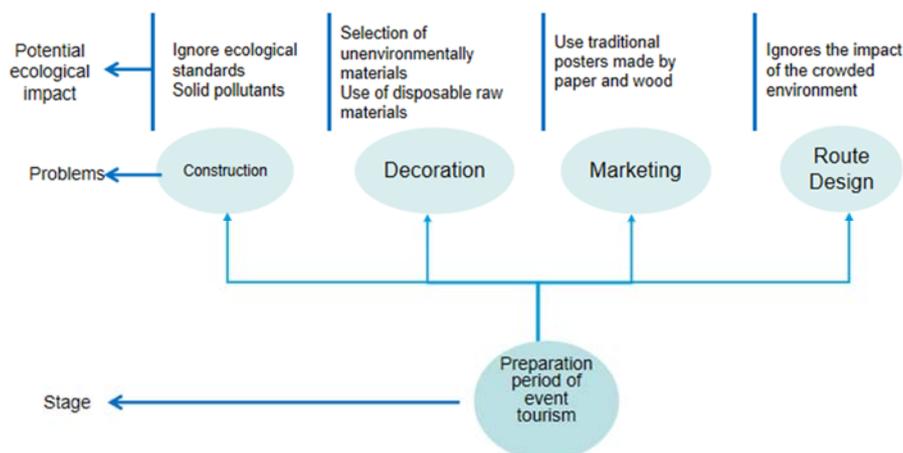
It can be seen from the research at home and abroad that the large amount of garbage generated by the exhibition industry is the root cause of the impact of the exhibition industry. However, there are no clear research results to explain how event tourism bring about ecological impact and what kind of impact, which is the focus of this article.

## 2. The impact of different stages of event tourism on the ecological environment

A finished event tourism project can be divided into three major stages from preparation to successful completion. At different stages, the ecological impact of the event tourism is different, and the ecological waste generated is not the same.

### 2.1. Stage 1: Preparation period of event tourism

The main tasks in the preparation period include site selection, work team formation, budget preparation, etc. What will affect the actual ecological environment mainly includes event venue construction and decoration, event tourism promotion and travel route design as show in Fig 1.



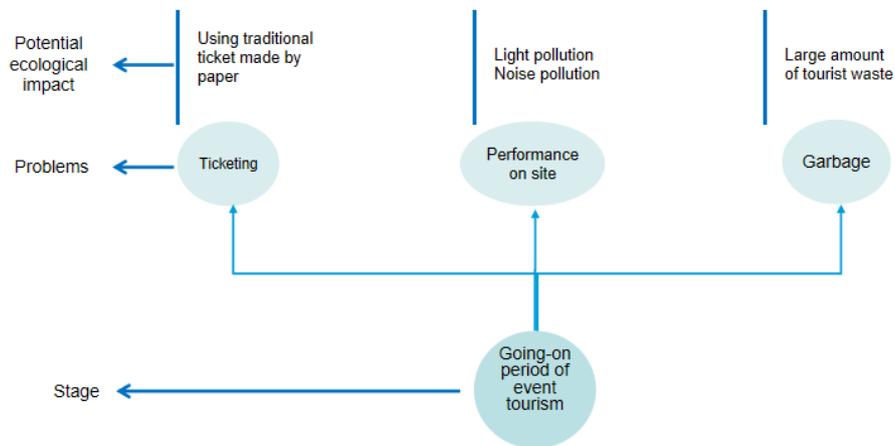
**Figure 1.** Potential ecological impact in stage 1.

The way to attract tourists of event tourism is by a certain series activities and projects. There must be a place for the activities to be carried out, which will involve construction and decoration. However, at present, most domestic event and activities ignore ecological standards from design to construction, especially the building materials, such as the selection of disposable raw materials and chemical pollution materials.

Due to the clustering characteristics of the event, the plan of the tourist route needs to consider the impact of a large number of tourists on the ecological environment in a short period of time. However, in actual operation, in order to emphasize the effect of tourism, the ecological environment is always be the sacrificed party.

### 2.2. Stage 2: The going-on of the event tourism

The main tasks during this period include ticket management, cultural and recreational activities management, and organization of tourists. Of which impacts on the ecological environment mostly including ticketing, designing, operation of recreational activities, and garbage generated by tourists as show in Fig 2.



**Figure 2.** Potential ecological impact in stage 2.

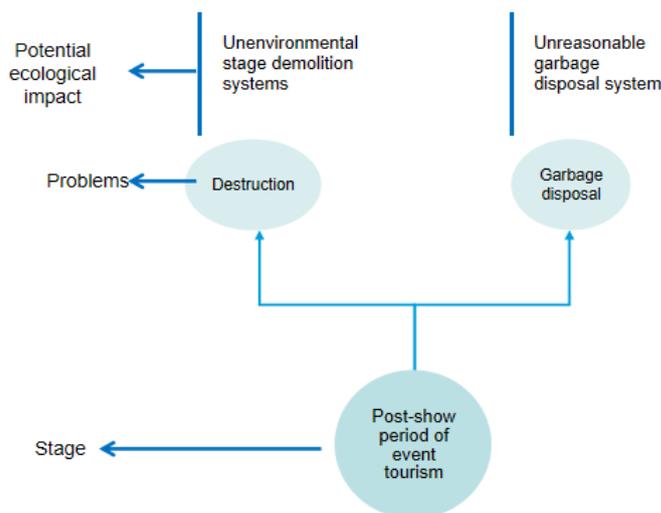
For performance, in addition to the high-power lighting equipment, the sound of high-decibel audio, actors and tourists have caused inevitable light and noise pollution to the venue of event.

The most important negative impact of the ecological environment during the event is a large amount of tourist waste. Take the Liyang Scenic Spot in Tunxi District of Huangshan City as an example, during the "Halloween" eve cruise, the scenic spot infiltrated about 30,000 people in a short time that night while the best capacity of it is 8,000 people, so tourist waste was concentrated after 8 pm due to activities. In addition, the increase in vehicles and the use of fireworks in the short term will cause local air pollution.

*2.3. Stage 3: The post-event tourism period*

In fact, the biggest impact on the ecological environment is the disposal of consumables and garbage in this period as show in Fig 3.

At present, there are no relevant green construction measures or environmental protection measures for event tourism in the scenic spot. For cost control purposes, most organizers, especially small and medium-sized organizations, do have an unreasonable post-show garbage disposal system. The leftovers of the stage construction materials creates solid pollution, and water pollution and soil pollution are caused by living waste left by tourists.



**Figure 3.** Potential ecological impact in stage 3.

### **3. Characteristics of event tourism pollutants**

#### *3.1. Various types of pollutants*

It lasts a long time from the preparatory period to the post-show stage, which involves a wide range of works that produce a variety of pollutants, including solid waste, disposable supplies, water pollution, noise pollution, light pollution, air pollution, etc.

Taking air pollution as an example, any event tourism activities are inseparable from the corresponding service facilities such as air-conditioning in the accommodation area that will emit a large amount of carbon dioxide into the air, which will seriously affect the air quality in the exhibition area. While the concentration of self-driving tourists has increased the pollution of vehicle exhaust emissions in the air.

#### *3.2. Limited space and Concentration of pollutants*

The highly concentrated flow of people during the event has increased the amount of garbage, but the space for tourism activities is relatively fixed so the garbage generated by the activities is relatively concentrated.

Short-term human traffic exceeding the environmental carrying capacity is an important factor causing serious environmental pollution. There is data in the event tourism showing that the daily water consumption of the exhibition activities averages 260 tons [3]. In 2001, the garbage produced by various exhibitions ranged from 60 tons to 12,000 tons, with an average of 2,934 tons of garbage. The waste produced by 832 major exhibitions in the UK was as high as 730 million US dollars.

#### *3.3. High rate of recycling and reusing*

Taking solid pollutants as an example, including papers, plastics, metal packaging containers or stage-built materials which are mainly used in the construction and the disposable products such as paper, plastic bottles, peels and plastic packaging.

Among them, recyclable garbage accounts for 75%~80% of all, while in ordinary households, the proportion of these ingredients is only 20~30% [4] [5]

### **4. The path of sustainable development of event tourism**

#### *4.1. Strengthening the construction of environmental protection policies*

From the perspective of environmental protection, a series of practical and feasible event tourism management strategies are formulated for sustainable development, from pre-planning to post-show destruction and garbage disposal, to meet environmental protection standards.

#### *4.2. Enhancing the management of sustainable module building materials*

The event stages are built using environmentally friendly materials, especially degradable materials, recycled materials and purifying materials. Meanwhile, the design and application of the removable building tools and the modular design are increased, thereby improving labor efficiency, saving the construction loss in the early stage and increasing recycling of the building materials.

#### *4.3. Optimizing waste treatment system on-site*

Establish a complete garbage collection system on site to realize classified recycling and timely disposal, and employ staff to directly sort and recycle the reusable ingredients such as beverage bottles, packaging bags, fabrics, waste plastics, waste paper, waste glass, and waste rubber in solid waste.

Secondly, signed a cooperation agreement with the organizer of the event tourism, and implemented the reuse of garbage such as event stage construction, decoration and advertising materials to improve the recycling rate of garbage.

## 5. Conclusion

The event tourism industry has received extensive attention from the government and society because of its strong driving effect on related industries, and it has been rapidly developed. However, due to many reasons such as the design of the stage and the use of materials, the “smoke-free industry” has increasingly affected the ecological environment.

In order to build a eco-friendly society and optimize the ecological impact of event tourism, we'd better vigorously promote the awareness of ecological environmental protection, guide the tourism organizers as well as the participants of the event to form a green event tourism development awareness through the social media.

It is necessary to establish scientific green evaluation indicators with reward and punishment mechanisms from the perspectives of the use of raw materials, booth design, service management, etc., and establish an all-round evaluation system for the entire event tourism industry to reduce the impact of post-show activities on the ecological environment.

## Acknowledgments

This work is supported by Humanities and Social Sciences Research Project of Department of Education of Anhui Provincial (SKHS2016B03); Anhui Provincial Tourism Commission Talent Training Base Project (YYRCYB1701).

## References

- [1] D. Getz. *Event Management & Event Tourism* 2nd ed. Cognizant Communication Corp.2007
- [2] Dai Guangquan. *Festivals, Festivals and Event Tourism - Theory, Cases, Planning* [M]. Beijing: Science Publishing, 2005: 35
- [3] Sun Minggui,Zhang Hongyuan. Discussion on the Construction and Development of Green Exhibition System [J]. *Future and Development*, 2006, (12): 56-59.
- [4] Ma Jianli, Li Liangyu, Zhao Youcai et al. Feasibility analysis of resource-based technology for exhibition tourism waste [J]. *Environmental Sanitation Engineering*, 2007.15 (6): 12-15.
- [5] Feng Yihui,Zhong Mengyi. The Green Development Path of the Exhibition Engineering Industry: An Empirical Study Based on Samples [J]. *Ecology and Economy*, 2014, (05): 111- 116.
- [6] Zhang Xiaoming, Chen Wei. Comparative Analysis of Sino-German Convention and Exhibition Industry Based on Industrial Ecology [J]. *Zhejiang Academic Journal*. 2016, (05): 196-201.
- [7] Liu Jian, Zhang Chao, Gao Chengda, Shen Qiang.An Impact Analysis of Exhibition Industry on Ecological Environment [J]. *Economic Forum*,2018 (11): 139-142.
- [8] Zhang Xiaoming, Liang He. On the Ecological Responsibility of the Government in the Process of Ecologicalization of Exhibition Industry [J]. *Social Sciences in Ningxia*, 2015, (01): 90-95.