

Exploring the Green Development of Large Scale Sports Events in China from the Perspective of Ecological Civilization

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ABSTRACT

China attaches great importance to the development and construction of ecological civilization, but the hosting of large-scale sports events often involves ecological environment problems caused by the construction of sports facilities during the preparation stage, urban traffic congestion caused by the rapid increase in population during the event hosting stage, and the waste of resources caused by the low utilization rate of sports facilities during the later stage of the event. The concept of harmonious coexistence between humans and nature serves as a theoretical guide for the green development of large-scale sports events in China. How to effectively reduce the negative impact of large-scale sports events on the ecological environment and achieve green development of large-scale sports events is an urgent problem that needs to be solved. Therefore, this study uses methods such as literature review and logical analysis to sort out and analyze the current development status of integrating green concepts into sports events. Based on this, relevant suggestions are proposed to achieve a harmonious and win-win situation between events and the environment.

KEYWORDS

Management of Sports; Green Development; Large Scale Sports Events.

1. INTRODUCTION

The report of the 20th National Congress of the Communist Party of China pointed out that it is necessary to firmly establish the concept that green mountains and clear waters are as valuable as mountains of gold and silver, and plan development from the perspective of harmonious coexistence between humans and nature. Promoting green and low-carbon economic and social development is a key link in achieving high-quality development. Green and low-carbon is a new goal and new requirement for China's future economic and social development. Chinese path to modernization must be a modernization in which people and nature coexist harmoniously^[1]. The sports event industry is an important economic form of social development, and large-scale sports events are an important carrier for enhancing the coordinated development of the sports industry chain, optimizing the upgrading of the sports industry, promoting urban development, and enhancing urban image^[2]. However, for a long time, the resource consumption level in the traditional development model of sports events has approached the threshold of urban carrying capacity, bringing a series of serious environmental problems^[3]. With the increasing attention to the concept of green development, exploring the implementation path of green transformation in sports events has become a hot topic in theoretical research. How to achieve green hosting of sports events, reduce the negative impact of events on the ecological environment, release the pressure of environmental self repair, and promote sustainable development of large-scale sports events and the ecological environment has become a widely concerned issue in the world today^[4]. From the perspective of ecological civilization, the

pursuit of harmonious coexistence between humans and nature is the main characteristic of the development of sports events in China^[5], By utilizing green development methods, we can minimize the damage to the ecological environment, promote the common development of economy, politics, and culture, and thus achieve a harmonious and win-win situation between sports events and the environment^[6]. Research on the relationship between large-scale sports events and the ecological environment in China mostly focuses on the value of "Green Olympics" and the protection of the ecological environment. There is a lack of relevant research that combines environmental goals, social goals, and economic goals to comprehensively consider decision-making issues related to large-scale sports events^[7]. Based on this, this study attempts to explain the green development path of sports events from the perspective of green development, with ecological and environmental protection as the bottom line, avoiding the economic oriented development model of "first destruction, then governance", and proposing countermeasures and suggestions for achieving green and sustainable development of sports events.

2. THE CURRENT SITUATION OF INTEGRATING GREEN CONCEPTS INTO SPORTS EVENTS

2.1. The Concept of Green Development is Weak, and Ecological Protection Measures are Weak

Large scale sports events have a positive impact on the host city. Hosting large-scale events can improve the city's image, promote urban quality improvement, and promote urban economic development. The essence of green development in sports events is the issue of resource consumption and energy efficiency in event management. A sustainable model should be established through carbon emission control and low energy consumption throughout the entire process of event hosting^[8]. However, due to the weak concept of green development and the absence of ecological protection measures, the city hosting the event has experienced a surge in pedestrian traffic, resulting in urban traffic congestion, severe carbon emissions exceeding standards, and resource loss caused by idle venues after the event. Large scale sports events often overlook the issues of ecological environment management in the early and later stages. Most events only consider the pollution generated during the event period, and pay less attention to the pollution before and after the event, resulting in incomplete green development of large sports events. At the same time, the relevant responsibilities for environmental management in the later stage of the marathon have not been clarified, and there is a lack of incentive mechanisms for public participation in environmental protection activities, resulting in inadequate public management of plastic waste after the marathon.

2.2. Incomplete Top-level Design, Incomplete Laws and Regulations

At present, most of the relevant policies are guiding documents, with low mandatory implementation for the green development of sports events, and the content involved is relatively single, which cannot provide good policy support for the green development of large-scale sports events. There is a lack of clear guidance from relevant departments on the green development of sports events. Currently, the definition of responsibility for ecological environment damage in large-scale sports events is relatively vague in laws and regulations, and there is no refinement of the handling methods and punishment measures for sports event problems. There is also no clear protection measures provided in legislation. There are very few policies related to the green development of large-scale sports events, and most of the policies that have been issued mainly focus on the relevant details of event hosting. There is relatively little mention of the requirements for ecological environment protection in large-scale sports events. Moreover, the laws and regulations for the green development of sports events are not perfect, and the definition of responsibility for the ecological environment damage of large-scale sports events is not clear enough, making it difficult to define the responsible parties. Only

environmental polluters and ecological disruptors are blamed for the ecological environment damage problem^[9], This leads to insufficient enforcement of ecological environment protection during urban sports events, resulting in low mandatory enforcement of green development for sports events, and inability to provide strong policy support for the green development of large-scale sports events. At the same time, there is no detailed approach to address the ecological and environmental issues of large-scale sports events, which makes it difficult for cities to consciously increase their efforts in ecological environment protection when hosting events, resulting in a lack of action for the green development of large-scale sports events. The organizational management is not perfect enough, and the guarantee mechanism has not been established yet.

2.3. The Organizational Management is Not Perfect Enough, and the Guarantee Mechanism Has Not been Established Yet

The organization and management of green development in current large-scale sports events are not yet perfect, resulting in unclear division of responsibilities among relevant departments and difficulty in forming a joint force in ecological environment protection, making the green development of large-scale sports events slow and difficult to achieve breakthrough progress. China's sports industry has not timely proposed a clear organizational and management theoretical system for environmental pollution issues and the actual characteristics of large-scale sports events, nor has it proposed a green development organizational and management plan, resulting in a lack of complete green event hosting standards and implementation processes for domestic event hosting to guide the green organization and coordination of events^[10]. Although sports events have initially formed a regulatory system, there are still problems such as weak systematic and professional regulatory systems^[11], and a lack of regulatory guarantee mechanisms in the green development of large-scale events. China has not established an evaluation mechanism for sports events, resulting in many cities not only having repeated events, but also lacking corresponding mechanisms to constrain organizers to limit event activities within the limits that the natural and ecological environment can bear during large-scale sports events, increasing the environmental burden. Moreover, there is a lack of unified standards and supervision mechanisms to evaluate the true effectiveness of green development in competitions. During the event, there is no relevant department or mechanism to supervise the site selection, construction, environmental protection measures, and whether the event meets the requirements of green development. As a result, many cities blindly pursue the scale of the event in order to cater to the event, and lack prevention and protection measures when promoting green event hosting, causing damage to the urban ecological environment and making it difficult to restore it^[12]. This is also an important reason why large-scale sports events are difficult to fully achieve green development.

2.4. The Technical Means are Relatively Single, and the Degree of Digital Integration is Limited

The lack of emission reduction measures for large-scale sports events has made ecological carbon sinks the main way for sports events to achieve carbon neutrality^[13]. At present, except for a few international sports events such as the Olympics, Asian Games, and World Cup that adopt green and low-carbon measures in venue design, energy utilization, transportation, etc., general large-scale sports events can only achieve green development goals by purchasing ecological carbon sinks. For example, the Hangzhou Marathon mainly offsets carbon emissions by planting trees in mountainous areas, which is a relatively simple way to achieve and has a limited impact on the green development of sports events. At present, the carbon reduction measures adopted are relatively simple and have certain limitations in scope. The achievement of carbon neutrality goals in large-scale sports events requires energy conservation and emission reduction as the core means, while increasing the application of digital technology to promote more intelligent green development in large-scale sports events. However, whether it is to improve the efficiency of existing energy utilization or to achieve energy conservation and emission reduction through the use of new energy and other means, it

requires technological upgrading as support, which requires more financial support. The vast majority of large-scale sports events do not have sufficient funds to support corresponding technological innovation, resulting in relatively simple carbon reduction measures and difficulty in deepening the development of green sports events.

3. GREEN DEVELOPMENT PATH FOR LARGE-SCALE SPORTS EVENTS IN CHINA

3.1. Promoting the Development of Ecological Sports Events and Implementing the Concept of Green Sports

Adhering to the development concept of innovation, coordination, green, openness, and sharing, we aim to build a diverse green culture for sports events by designing green slogans, environmentally friendly sportswear, and recording green sports promotional videos. We aim to enhance the public's participation in environmental governance, strengthen their sense of responsibility, participation, and identity, promote the importance of green and sustainable development, and implement the concept of green sports. At the same time, we will give full play to the exemplary and leading role of event organizers and participants, practice a green and low-carbon lifestyle during the event, and encourage the surrounding people to establish correct values and develop behavior habits to protect the environment. Utilize the preparation of sports events to enhance the overall awareness of green development among residents, and empower the green development of large-scale events from a cultural perspective. The travel of event enthusiasts is an important source of carbon emissions, therefore, effective guidance and control of public travel will greatly reduce the carbon emissions of the event. By focusing on the public transportation service network of the city hosting the event, relevant travel guidelines can be developed, and a transportation route map to the competition venue can be drawn to provide targeted travel information services for the audience during the event. By relying on digital technology, actively building a green sports exchange platform, taking sports events as an opportunity, vigorously carrying out ecological civilization publicity and education activities, and strengthening the dissemination of green concepts in sports events. At the same time, residents can express their opinions through the platform, engage in two-way communication and interaction, effectively understand their ecological and environmental needs, achieve information resource integration, and jointly promote the green development of sports events, thereby effectively promoting the modernization of smart governance capabilities for green development of sports events.

3.2. Establishing a Sound Regulatory and Policy System to Ensure Green Development

The government should clarify the concept of green sports development, establish a systematic and complete policy system from three levels: macro policy, meso policy, and micro policy. At the national level, sufficient policy support should be provided for the green development of sports events, and the practice of integrating green concepts into large-scale sports events should be standardized. Specific policy measures will be introduced at the local level to provide financial incentives, such as tax cuts and subsidies, to incentivize event organizers, sponsoring enterprises, and partners to adopt low-carbon and green measures. Encourage the green transformation of sports events through financial means, such as setting up special support funds for green development, distributing green consumption coupons, etc., to reduce the operating costs of low-carbon events, activate sponsoring enterprises and industrial vitality, thereby enhancing the enthusiasm of enterprises and the public to practice the concept of green development^[14], and promoting the implementation of the concept of green development in sports events. By providing technical and financial support, we encourage event organizers to adopt low-carbon and innovative technologies^[15], such as renewable energy, efficient lighting systems, and carbon emission monitoring technologies, to reduce their impact on the

environment, promote the achievement of carbon emission reduction goals, and ensure the implementation of green development in large-scale sports events. At the specific event level, targeted policies need to be formulated to increase ecological protection efforts. At the same time, it is necessary to improve the relevant regulations in laws and regulations regarding the definition of ecological responsibility for sports events, clarify the responsible parties, and refine the handling methods of ecological environment issues in sports events, in order to build a guarantee for the green development of large-scale sports events.

3.3. Innovate Organizational Management System to Promote Green Sports Governance

Innovate the organizational management system, formulate ecological protection rules based on the characteristics of different stages of large-scale sports events, and form a complete organizational management system with "pre competition planning, action during competition, and post competition evaluation", providing standardized guidance for the hosting of large-scale sports events. Adhere to government leadership and social participation, focus on the shortcomings and weaknesses in the green development of sports events, attach importance to the overall planning of events, and make reasonable and coordinated planning. At the level of site selection and functional structure design of event venues, it is necessary to combine with the concept of green development, so that the overall design is coordinated with the environment, achieving dynamic balance and positive interaction^[16]. In the evaluation of indicators for sports venue facilities construction, green sustainability should be taken as an important evaluation criterion, adhering to the concept of green construction and strengthening the application of green building technology. Utilize environmentally friendly materials, new energy equipment, and energy-saving facilities, and prioritize the use of green energy sources such as wind power, hydropower, and solar energy as the power source for the venue based on actual conditions. Focus on the issue of resource reuse in the later stage, and demonstrate the practice of green development concept in sports events by strengthening overall design. Simultaneously establish appropriate reward and punishment mechanisms. National and local governments should provide certain financial support and policy incentives to encourage event organizers to implement green development measures. Each responsible department of the event organization should effectively fulfill their corresponding responsibilities, clarify the division of responsibilities, and implement the responsibility system. Establish a reasonable supervision mechanism, strengthen the assessment of the implementation of green development in sports events^[17], scientifically evaluate green development after the competition, and promote green sports governance.

3.4. Innovate Organizational Management System to Promote Green Sports Governance Increase the Application of Digital Technology to Enhance the Level of Green Development

In order to empower urban green development, large-scale sports events should achieve energy conservation and emission reduction through various innovative approaches such as green office and waste utilization, and minimize environmental pollution as much as possible. At the same time, promoting technological innovation and green technology in sports events to enhance the sustainable development capacity of large-scale sports events. The application of digital technology will promote the carbon reduction of large sports venues, attach importance to the basic needs of digitization, increase the supply of digital core technologies, combine the most advanced digital technologies such as the Internet of Things and artificial intelligence with venue construction and operation, and promote energy efficiency improvement through intelligent control of lighting, temperature, energy consumption, and other methods^[18]. With the help of intelligent management systems and precise measurement technology, supported by environmentally friendly materials, clean energy, efficient and energy-saving technologies and processes, sports equipment manufacturing, venue construction

and operation can achieve refined management of production, efficient utilization of resources, avoid energy waste and reduce environmental pollution, and achieve green venue operation^[19]. Various sports venues should actively introduce energy-saving and consumption reducing equipment, and upgrade and transform outdated management systems, such as adding intelligent energy control systems, water treatment and recycling systems, low-energy appliances, recyclable appliances, air quality and noise monitoring equipment. Relying on technological innovation and adopting various approaches to efficiently respond to environmental pollution caused by sports events. Secondly, for the environmental pollution that has already been caused, advanced pollution treatment technologies should be adopted in a timely manner. Collaborate with environmental protection agencies to actively introduce cutting-edge pollutant treatment technologies and promote the application of new technologies in sports events.

4. CONCLUSION

Green development is a development that conforms to nature and promotes harmonious coexistence between humans and nature. It is a coordinated, high-quality, and sustainable development of economic and ecological benefits in sports events. As green development becomes the main task of ecological civilization construction, the high-quality development of the sports industry must achieve green and low-carbon development. The broad application scenarios and development prospects of digital technology provide possibilities for the green development of large-scale sports events. Taking the green transformation of sports events as an opportunity, we will strengthen top-level design and institutional optimization, promote high-quality urban development, and ultimately achieve a win-win situation of economic development and environmental protection.

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