

# Chapter 17

## Incorporate Environmental Protection into the Olympic Games: The Case of the Beijing Green Olympics

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### ABSTRACT

*The objective of this chapter is to illustrate how Beijing has addressed its environmental issues to fulfill its “Green Olympics” promise. A general overview is first provided on how environmental protection has become an important part of the Olympic Games. Then, the chapter presents the extensive environmental efforts associated with hosting the Beijing Olympic Games, mainly focusing on such areas as air quality, energy, transportation, water environment, green coverage, solid waste, and environmental education. Finally, the chapter touches on the environmental impact of the Beijing Olympics from local residents’ perspectives, illustrating that the Beijing Olympics provided a unique opportunity for the city to speed up its urban environmental reform. With a mandatory environmental policy and collective efforts involving the government, environmental agencies, and community groups, hosting a mega sport event can create a positive environmental legacy to the host city and its country.*

### INTRODUCTION

Environmental problems such as global climate change, air and water pollution, greenhouse emission, and deforestation are getting more severe as a result of increasing human ignorant behaviors. Environmental problems are evident in many

aspects of our daily activities; for instance, sports as an important part of human activities generate a variety of impacts on the ecosystems. According to the United Nations Environment Program (UNEP) (2012a), sports can result in more traffic congestion, noise pollution, destruction of the natural and physical environment, and modifica-

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tion of land use patterns. Sports can also deteriorate local eco-systems, consume irreplaceable natural capital, and produce carbon emissions related to climate change. Moreover, construction of sport facilities may cause environmental degradation, loss of habitats and natural drainage, soil erosion, and deforestation. As the number of people participating in sports keeps rising, serious attention needs to be paid to sport-related environmental problems.

The Olympic Games, one of the world's largest sport events, bring huge crowds into the host city and place tremendous stress on the environment, which could negatively contribute to large environmental footprints. For instance, the 1992 Winter Olympic Games in France resulted in pervasive environmental damage and urged the International Olympic Committee (IOC) to respond and present a strategy for repelling the adverse impacts of the mega event (Cantelon & Letters, 2000). Recognizing its responsibility towards the promotion of sustainable development, the IOC tried to ensure that the Games take the environment into account in a responsible way. During the Centennial Olympic Congress in 1994, the environmental liability of the Olympic Games attracted attentions from all parties and triggered extensive discussions on how actions should be taken in order to place sport at the service of humanity. In 1996, after realizing the significance of the environment and sustainable development, with the aim to reduce the negative ecological impact associated with hosting the Olympic Games, the IOC integrated the environment as the third dimension of Olympism, alongside with sport and culture (UNEP, 2009). Since then, environmental issues have become one of the key factors to choose a host city, and have been considered as the essential concerns during the host city's preparatory period. Following the IOC's request, Olympic host cities have demonstrated their strong commitment on achieving sustainable environmental development in sports and through sports. According to the UNEP (2007, 2009), the 2000 Sydney Games, the

2006 Torino Games, and 2008 Beijing Games all set new benchmarks for environmental protection.

The Olympic Games were hosted mostly in western countries such as the United States, Canada, Australia, and several European countries. Thus, it is not surprising that a majority of the research studies about the Olympic Games' environmental issues were conducted in western countries. In addition, when compared to developed countries, developing countries often have a major competitive drawback in obtaining the host right of the Olympics, with being lack of adequate infrastructure as one of the foremost disadvantages. Generally speaking, as hosting the Olympics in an environmentally responsible way did not become a mandatory task until 1996, there is a general lack of data, information, and knowledge about the "Green Games". Therefore, authors of this chapter choose to focus on the environmental aspect of the 2008 Beijing Olympic Games. As the third Summer Green Games, the first Green Games in Asia, and the first Olympic Games in a developing country, the Beijing Games were of great significance and special meaning to the world, Asia, and China as the host country.

China's poor air quality drew global attention before the Olympic Games. In 1996, the values of some major air pollutants including Sulphur Dioxide (SO<sub>2</sub>), Nitrogen Dioxide (NO<sub>2</sub>), total suspended particles (TSP), and particulate matter with an aerodynamic diameter of 10 microns or smaller (PM<sub>10</sub>) were 2-7 times higher in China's national standards than those of the World Health Organization (UNEP, 2009). The higher value of air pollutants, the greater the health concerns. As the capital city of China, Beijing's growing population, increasing real-estate development, accelerated urbanization, wide-spread construction activities, as well as increasing demand for vehicular transport have led to exacerbated air pollution problems (Hao, Tain, Lu, 2002; Hao, Wang, Li, Hu, Yu, 2005; Liu, Hu, Li, Wang, 2006). As the political, economic, cultural, and educational center of china, Beijing's continuous

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