

Chapter 1

THE BEIJING 2008 GAMES



1.1 INTRODUCTION

UNEP's involvement with the Beijing Games started in November 2005 when it signed a Memorandum of Understanding with the Beijing 2008 Organizing Committee of the Olympic Games (BOCOG). The agreement laid the foundation for UNEP to support BOCOG on the greening of the Games. As part of the agreement, UNEP conducted a review and published a report on the environmental performance of BOCOG in October 2007. The report reviewed the environmental efforts of the Committee in meeting its commitment to organize a "Green Games" and concluded that Beijing was on track for achieving the promises it laid down in its 2000 bid.

UNEP also pledged to conduct a final assessment to review the impact of the environmental measures that were implemented by Beijing for the Games. The findings of the assessment are contained in this report.

UNEP staff responsible for sport and the environment visited Beijing several times to observe the environmental performance of BOCOG. They engaged in discussions with BOCOG, the Beijing Municipal Government and non-governmental organizations (NGOs) to collect data. UNEP sent a high level delegation to the Olympic Games, led by its Executive Director, to observe first hand some of the impacts of the environmental measures that were undertaken by Beijing for the Games.

In early December 2009, UNEP sent a delegation of experts to Beijing to collect data and hold final discussions with relevant staff of the Beijing Municipal Government, BOCOG and NGOs. The only comprehensive data that was available on the Games was from the Beijing Municipal Government and BOCOG. This report is therefore



UNEP Executive Director Achim Steiner, (right) and the Director General of Beijing's Environmental Protection Bureau, Shi Hanmin, on board a compressed natural gas bus during the Games.

based almost exclusively on data from these two organizations. UNEP's team of experts have however, tried to provide objective analysis, comments and recommendations based on this data. It should be noted that in some instances, required data was not available.

The Olympic Games and the environment

The International Olympic Committee (IOC) has been a pioneer and leader in its efforts to green sport. As far back as 1994, at the Olympic Games in Lillehammer, Norway, environmental management has been a major focus. Several greening projects were implemented by the organizing committee during the preparation and staging of the 1994 Games. That same year, at the Centennial Congress of the Olympic Movement, the environment became the third dimension of Olympism alongside sport and culture. A Sport and Environment Commission was established in the IOC to advise the Executive Board on the integration of environmental

issues in the Olympic Games. The environment also became one of the criteria for evaluating bids for Olympic Games and for assessing the preparation and staging of Olympic Games.

The environment and the Beijing 2008 Games

When Beijing was awarded the Games in 2001, the IOC Evaluation Committee noted: "Beijing currently faces a number of environmental pressures and issues, particularly air pollution. However, it has an ambitious set of plans designed, which are comprehensive enough to greatly improve Beijing's overall environmental condition. These plans and actions will require a significant effort and financial investment. The result would be a major legacy for Beijing from the Olympic Games, which include increased environmental awareness among the population."

In 2001, Beijing's Gross Domestic Product (GDP) was growing 11 per cent a year. The city had a population of over 12 million people and because Beijing was

heavily dependent on coal power and the number of vehicles on its roads had increased by 13 per cent, the city was grappling with severe air quality issues. Only 50.7 per cent of the days that year were considered 'blue sky days' according to Chinese air quality standards. Beijing, like most other cities in the developing world, was under severe water stress.

1.2 THE BID COMMITMENTS

Beijing had a very ambitious programme: to offer a 'Green Olympics' to the world. Several targets of the Beijing 'Environmental Master Plan' (an environmental protection programme developed by the Municipal Government for the period 1996-2015, funded by the World Bank) were integrated into the bid with accelerated deadlines. Some targets, originally scheduled to be achieved in 2010, were moved forward to 2008, the year of the Games.

Table 1.1 shows the 20 key environmental goals set by the city of Beijing. These are examined in detail throughout this report.

TABLE 1.1: ENVIRONMENTAL GOALS FOR BEIJING BID COMMITMENTS

	Goal	Area of focus
1	Construction of the second Shan-Jing natural gas pipeline with a transport capacity of 4-5 billion m ³ /year, by 2007.	Energy
2	Conversion of coal burning boilers in the urban zone; increased use of clean fuels and energy structure readjustment.	Energy
3	District heating supply to over 50% of the urban civil residential area. Electricity and geothermal heating coverage up to 16 million m ² .	Energy
4	Improvement of transport infrastructure and construction of key roads.	Transport
5	Improvement of the public transportation system, including use of clean fuels in 90% of the cities public buses and 70% of its taxis.	Transport / energy / air quality
6	Implementation of a vehicle emissions standard equal to Euro II for light vehicles by 2004.	Transport / air quality
7	Improvement of the management of flying dust in building sites and road construction. Prohibition of any kind of open air incineration. Coverage of outdoor storage areas of waste and other materials.	Air quality
8	Protection of Miyun and Huairou reservoirs (sources of drinking water) and improvement of their water quality. Implementation of the silt elimination and water clarification project in Guanting reservoir.	Water
9	Technical transformation and renovation of the Jingmi canal to improve water quality and flow.	Water
10	Readjustment of the agricultural structure to promote development of high quality, high efficiency and water saving agriculture. Strengthened efforts to reduce flying dust in the agricultural sector.	Water / air quality
11	Improvement of the city sewage network and wastewater treatment system. A pledge to create a 2.8 million m ³ /day wastewater treatment capacity by 2007.	Water
12	Construction of hazardous waste disposal facilities with a total capacity of almost 10,000 tons/year (including medical and radioactive waste processing and disposal plants).	Waste

13	Implementation of a safe urban domestic waste disposal system by 2007. Establishment of processing facilities for non-hazardous urban waste in the Beijing suburban area.	Waste
14	Reduction and control of industrial pollution. Implementation of industry pollution registration, monitoring and licensing system. Closing down of the most highly polluting, high energy consuming and resource-wasteful enterprises.	Industry/waste /water / air quality / energy
15	Relocation of more than 200 industrial enterprises from within the Beijing Fourth Ring Road. Readjustment of industrial structure. Relocation, closure or renovation of heavy polluting and energy consuming plants in the Beijing southeast area and Shijingshan district. Phase-out of old technologies. Improvement of environment quality in the southeast suburb and Shijingshan district.	Industry /waste /water / air quality / energy
16	To ensure 40% of green cover in the urban area. Establishment of a green belt alongside the Fourth Ring Road (100 m wide green belt on both sides of the road except for those sections running through already built up areas).	Ecosystem
17	Realization of the Five River Ten Road green belt. Accomplishment of nearly 50% of forest coverage rate. Realization of three green ecological belts in the mountain, plain and urban areas respectively.	Ecosystem
18	Strengthening of natural preservation zones and the establishment and management of key conservation areas (such as wetlands, forests and bird habitats 8% of the municipal area to be natural protection areas.	Ecosystem / protected areas
19	Formulation and implementation of an action plan to phase out Ozone-depleting Substances (ODS). Achievement of the target by 2005.	Air quality / ozone
20	Implementation of cutting-edge environmental technologies in the design of Olympic venues. Use of natural resource-efficient, non-polluting and recyclable materials for facilities and equipment. Preservation during the construction of Olympic venues of indigenous vegetation and ecological ecosystems. Protection of cultural relics. Improvement of green coverage. Promotion of public transportation and clean fuel vehicles in the Olympic transport system.	Venues design / natural resources / forestation / transport

Additional commitments

The Beijing Olympic Games Organizing Committee (BOCOG) made some additional commitments over and above the bid commitments in its efforts to stage a truly 'Green Olympics'. The commitments included supporting environmental education and large scale awareness raising, cooperating with environmental NGOs, instituting environmental management systems, sustainable transportation during the Games, eco-design for the venues, green procurement (environmentally-friendly purchasing of materials), green accommodation, tree planting and green marketing.

The 'Green Olympics' concept was launched by BOCOG and the Beijing Municipal Government to promote the environmental sustainability of the Games. It was part of the more general 'One World One Dream' concept, which underlined BOCOG's commitment to Olympic values, among which sustainable development was a key element.

The 'Green Olympics' concept was reflected in the five Olympic Mascots: four were animals representing natural elements. The mascots promoted environmental awareness and underlined Beijing's commitment:

- Beibei - a flying fish and represented 'clear water'.
- Jingjing - a panda, conveyed the messages of environmental protection and 'Green Hills'.
- Yingying - a Tibetan endemic protected antelope showcased Beijing's commitment to Green Olympics and the 'Grass-covered Ground' idea.
- Nini - a flying swallow, represented the concept of 'Blue Sky'.
- The fifth mascot, Huanhuan, symbolized the Olympic Flame.

Beijing's investment in the environment

Overall, it is estimated that the authorities in China invested over US\$17 billion on environmental projects. The following projects listed in Table 1.2 benefited from the investment.

福娃 Fuwa



Mascots from left to right: Beibei, Jingjing, Huanhuan, Yingying and Nini © BOCOG.

TABLE 1.2 BEIJING'S ENVIRONMENTAL INVESTMENT, 2001 – 2007

Investment	Chinese Yuan	US Dollars
Total	119,160,430,000	17,433,000,000
I. Investment in urban environmental infrastructure	87,496,350,000	11,923,000,000
1. Sewage treatment project	12,741,270,000	1,864,000,000
2. Gas supply and distribution project	10,385,710,000	1,519,000,000
3. Heating supply project	11,553,330,000	1,690,000,000
4. Afforestation/Greening	14,620,020,000	2,138,000,000
5. Solid waste treatment	6,356,960,000	930,000,000
6. Other pollution control projects	31,839,060,000	4,658,000,000
II. Investment in pollution sources control	17,823,860,000	2,607,000,000
1. Industry pollution sources control	5,046,360,000	738,000,000
1.1 Sewage treatment	670,110,000	98,000,000
1.2 Air pollution source control	3,807,250,000	557,000,000
1.3 Solid waste treatment	90,760,000	13,000,000
1.4 Noise control	24,040,000	3,000,000
1.5 Other pollution control	454,220,000	66,000,000
2. Environmental investment along with new construction projects	12,777,500,000	1,869,000,000
III. Pollution control facilities operation cost	11,447,310,000	1,674,000,000
1. Sewage treatment plant; domestic solid waste and dangerous waste treatment plant	5,167,600,000	756,000,000
2. Other pollution control facilities	6,279,710,000	918,000,000
IV. Investment in environmental management capacity building	2,392,910,000	350,000,000
1. Monitoring	549,870,000	80,000,000
2. Supervision and information system	267,100,000	39,000,000
3. Publicity and education	77,030,000	11,000,000
4. Research and technical system	127,290,000	18,000,000
5. Others	1,371,630,000	200,000,000

Source: Beijing Environmental Protection Bureau



Workers clean the outside of the National Aquatics Centre prior to the Games.

The Organizing Committee and the greening of the Games

Organizing the Games was a massive undertaking for Beijing and China. The main body responsible for the organization of the Games was the Beijing Organizing Committee (BOCOG). The Organizing Committee was established in December 2001. It had 27 departments, one of which dealt with construction and the environment. The Construction and Environment Department had nine divisions, two of which focused on environmental issues – environmental management and environmental engineering. A Deputy Director of the Department of Construction and Environment was responsible for environmental activities of BOCOG.

At the time of the Games, BOCOG had around 8,000 staff with 14 of them working on environmental issues. The Games had 1.7 million volunteers, the highest ever in the history of the Olympic Games. The volunteers ranged from young people and students to elderly citizens of China.

It should be noted that the greening of the Games was a shared responsibility between BOCOG and the Beijing Municipal Government. The Construction and Environment Department of BOCOG coordinated environmental issues in the construction and operation of the venues across all cities, and in the organization of competition activities. The Beijing Municipal Government handled city-wide environmental improvement efforts including pollution

control measures, renovation and expansion of public transport and the overall greening of Beijing.

1.3 COMPELLING CASE FOR SUSTAINABLE GAMES

The Olympic Games provided an opportunity for Beijing to think about its developmental priorities. With such great citizen participation and media attention on all Games-related activities, the affects of activities on the environment, the health of the population and of the surrounding ecosystems became common-speak. For the average citizen of Beijing, environmental issues that might have, in the past, been taken for granted became major concerns. People began to appreciate the impact of these issues on their quality of life.

Air quality, more than any other environmental concern, dominated media reports on the Games, mainly because of the direct impact on the health and performance of the athletes. Government officials, athletes, sport officials and fans were all drawn into the debate on whether the air quality of Beijing would be safe for Olympic sport, particularly for endurance events. It created a media-frenzy in which journalists and media houses debated contrasting view-points and led to a general probe on the validity of official data released by the Beijing Environment Protection Bureau (EPB). Several other issues including energy, water and public transport also attracted media coverage, and thereby helped in kickstarting another debate and raised public awareness on these issues.

BEIJING 2008 OLYMPIC AND PARALMPIC GAMES**Key Facts**

Number of years planning	Over 7
Olympic Torch Relay	21,880 torch bearers over 137,000 kilometers
Event dates	Olympic Games: 8-24 August 2008 Paralympic Games: 6-17 September 2008
Venues	Beijing: 31 venues Shanghai, Hong Kong, Tianjin, Qingdao, Qinhuangdao and Shenyang: 1 venue each
Olympic athletes	11,468
Paralympic athletes	4,000
Olympic events	302 events (165 men's, 127 women's and 10 mixed)
Paralympic sports and disciplines	20
Olympic sports and disciplines	28
Paralympic awards and records	1,429 medals. 279 world records and 339 Olympic records.
Olympic awards and records	926 medals to winners from 87 countries and territories. 38 world records and 85 Olympic records broken
Countries represented	204
Olympic spectators	6.7 million
Paralympic spectators	3.45 million
Television audience	4.7 billion viewers watched over 500 hours of Olympic footage broadcast in over 220 countries
Number of journalists, Olympics	26,298 accredited journalists, 5,980 non-accredited journalists
Number of journalists, Paralympics	10,300 accredited
Olympic Officials, Coaches and Staff	9,175
Paralympic Officials, Coaches and Staff	2,500 officials and coaches from 143 countries

Sources: Beijing Environmental Protection Bureau.

THE GAMES AND THE ENVIRONMENT

1896 Athens: first modern Olympic Games with athletes from 14 nations

1900 Paris

1904 St Louis

1908 London

1912 Stockholm: athletes represent all five continents

1920 Antwerp

1924 Paris: "Swifter, Higher, Stronger" officially adopted as Olympic motto

1924 Chamonix (winter)

1928 Amsterdam

1928 St. Moritz (winter)

1932 Los Angeles

1932 Lake Placid (winter)

1936 Berlin

1936 Garmisch-Partenkirchen (winter)

1948 London

1948 St. Moritz (winter)

1952 Helsinki

1952 Oslo (winter)

1956 Melbourne/Stockholm

1956 Cortina d'Ampezzo (winter)

1960 Rome

1960 Squaw Valley (winter)

1964 Tokyo

1964 Innsbruck (winter)

1968 Mexico

1968 Grenoble (winter)

1972 Munich

1972 Sapporo (winter)

1976 Montreal

1976 Innsbruck (winter)

1980 Moscow

1980 Lake Placid (winter)

1984 Los Angeles: air pollution a concern for athletes

1984 Sarajevo (winter)

1986 IOC President suggests the environment as the third pillar of Olympism

1988 Seoul

1988 Calgary (winter)

1992 Barcelona: green designs used in the Olympic Village

1992 Albertville (winter)

1993 Sydney wins 2000 bid on the basis of strong environmental commitment

1994 Lillehammer (winter): first green winter Games

1994 "Environment" becomes the third pillar of Olympism

1994 UNEP and IOC sign agreement of cooperation

1995 IOC form a Sport and Environment Commission

1996 Atlanta

1998 Nagano (winter)

1998 IOC decides the Paralympic and Olympic Games will be held in the same host city and venues

1999 IOC adopts the Olympic Movement's Agenda 21, for sustainable games

2000 Sydney: first "Green Games"

2002 Salt Lake City (winter) 3 million trees, composting and recycling

2004 Athens: Narrow range of environmental commitments

2006 Turin: Creates a green legacy (winter)

2008 Beijing: Raises the bar for green ambitions

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The Olympic Flame summits Mount Everest, 8 May 2008.



Share the Dream

Share the Dream





