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Программа Организации Объединенных Наций по окружающей среде برنامج الأمم المتحدة للبيئة

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## **“Greening” of 2008 Beijing Olympic Games Impressive Says UN Environment Programme Report**

### **Remaining Concerns include Air Pollution; Offsetting of Greenhouse Gas Emissions; Public Awareness and Need to Boost Public Transport Use**

**Beijing/Nairobi, 25 October 2007**--Significant strides are being made to ‘green’ the 2008 Beijing Olympic Games, a report issued today by the United Nations Environment Programme (UNEP) says.

The hosting of the Games is also proving to be a catalyst for accelerating environmental improvements across the city as Beijing strives to balance rapid, often double-digit economic growth with health and environmental protection.

Achim Steiner, UN Under-Secretary-General and UNEP Executive Director, said: “The initial score card on the Beijing Olympics and Paralympics 2008 is positive in terms of the greening of the games”.

“The more than \$12 billion spent by the Municipal Government and Government of China, appears to have been well spent—and will be even more well spent if the lessons learnt and measures adopted are picked up by municipalities across the country so as to leave a real and lasting nationwide legacy,” he added.

The report says environmental measures are being introduced covering waste management, cleaner transport systems and water treatment, as well as new urban green belts including a 580-hectare Olympic Forest Park.

The Beijing Organizing Committee for the Olympic Games (BOCOG) should also be commended for accelerating the phase-out of ozone depleting chemicals and for the provision of energy efficiency and green energy appliances at buildings and sports venues.

The report says: “An interesting innovation is the widespread use in the venues of ground, water or air source heat pumps systems to provide buildings with heat in winter and air conditioning in summertime”.

Solar power is also being extensively deployed at stadia and at the Olympic village and the organizers have well-developed plans to re-use and recycle venues after the games close.

But while the report acknowledges the significant investment and achievements of the organizers of the 2008 Olympic Games, it also highlights some remaining concerns and missed opportunities that there may still be time to rectify.



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联合国环境规划署



Some of these are specific to the Games themselves, while others are linked to challenges facing the city of Beijing generally as it attempts to reduce pollution and steer its development onto a more sustainable path.

### **Air Pollution**

Air quality is among those priority concerns. The Beijing and Chinese authorities have relocated and refitted major polluting industries and there has been a switch away from coal-fired energy generation towards less polluting fuels like natural gas.

Older buses, taxis and cars have been scrapped in favour of ones powered by compressed natural gas or new vehicles and fuels that meet tougher, internationally recognized emissions standards such as the Euro III standard.

Between 2000 and 2006, concentrations of several key air pollutants including sulphur dioxide and carbon monoxide have as a result fallen.

But with more than 1,000 new cars being registered daily and with coal remaining a key energy fuel, some key pollutants remain stubbornly high.

For example, levels of small particles in the atmosphere, or PM<sub>10</sub>, which are hazardous to health, often greatly exceed World Health Organization Air Quality Guidelines.

“The city’s geographical location exacerbates the problem. The mountain ranges that surround Beijing block air circulation and prevent the dispersion of pollutants. Compounding the problem is the high number of dust storms. In the spring of 2006 the city endured 18 dust storms,” says the UNEP assessment report.

### **Greenhouse Gas Offsets**

Other concerns include a missed opportunity in terms of offsetting greenhouse gases. The Torino Winter Olympics of 2006 offset additional carbon dioxide through funding environmentally friendly energy projects in developing countries.

The Green Goal initiative of the 2006 FIFA World Cup adopted similar measures to cover greenhouse gases that could not be easily reduced at home.

Eric Falt, UNEP Director of Communications and responsible for the organization’s sports and environment programme, said carbon offsetting is “increasingly a feature of high-profile events and is an initiative being adopted by a growing number of sports organizations and private sector entities. It is not too late for BOCOG to openly declare a commitment on climate change and offsetting”.



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联合国环境规划署



### **Public Transport**

Another concern centres on the under-utilization of the city's expanding public transport network. Beijing has recently installed 16 km of Bus Rapid Transport (BRT) lines giving the system a total passenger capacity of 100,000 people per day. Two more BRT lines are under construction.

Beijing is also expanding surface and underground rail lines with four completed and four more, including the Olympic Line, currently under construction. The Chinese government says the eight lines will have a capacity of nearly four million people daily.

Overall Beijing's public ground transportation capacity is 19 million passengers per day, yet it is under utilized to the tune of around 8.5 million daily passengers.

The UNEP report urges the local authorities to adopt measures and incentives to bridge the gap in order to improve air quality and other environmental measures.

Mr Steiner said the report was a balanced assessment recognizing the achievements but also highlighting how more could be done to, for example, harness the city's new and existing public transport infrastructure.

The study also flags up concerns over voluntary environmental arrangements between contractors, hotels, caterers and providers of transport and the organizing committee.

"Vigilance will need to be the watchword to ensure last minute corners are not cut in the area of environment in order to meet deadlines. Meanwhile, the question of offsetting greenhouse gas emissions within China also remains an open question," said Mr Steiner.

"However, Beijing has already achieved a great deal, an achievement even more resounding when one reflects on the enormous challenges facing one of the world's most rapidly growing developing economies and its principal cities," he said.

When Beijing won the bid to host the 2008 Olympic and Paralympic Games, a decision was taken to accelerate and add to the existing Beijing Sustainable Development Plan scheduled to be completed in 2015.

Twenty key 'greening' projects are at the centre of the plan alongside the "Olympic Green" project incorporating 20 venues, the Olympic Village and the 760 hectare Forest Park.

The UNEP report covers these initiatives and reflects on the wider impacts of the Games on Beijing and beyond including organizers of future high profile international events.



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联合国环境规划署



UNEP notes that there has also been a great deal of liaison with relevant non governmental organizations including Greenpeace; WWF; Conservation International and IUCN-the World Conservation Union. It says the constructive approach between these groups, UNEP and the organizing committee has been another key feature of the Beijing Games.

### **Some Highlights from the Report on ‘Greening the Games’**

#### **Energy**

- Solar power is being used to light lawns, courtyards and streets at several venues including the Olympic Village. In the Feng Tai baseball stadium, for example, a 27 KW photovoltaic system supplies energy to the building.
- The National Stadium, where events such as athletics and football will be held, is being lit by a 130 KW photovoltaic system.
- Solar heating, geothermal and heat pump technology is being extensively deployed, for example at the Olympic Green Tennis Center.
- At the 400,000 square metre Olympic Village, reclaimed water from the Qinghe sewage treatment plant is being utilized for heating and cooling systems—around 60 per cent in electrical savings is anticipated.
- Other energy savings technologies include the deployment of translucent membranes in the ceilings and walls of the National Aquatics Centre or ‘Water Cube’ to allow in natural light. Specially designed ‘beam-pipes’ funnel sunlight into corridors, toilets and car parks at venues including the Olympic Green.

The report says: “UNEP believes the variety of clean energy and energy saving solutions being employed by venue designers in Beijing provides a positive showcase and an inspiration for future Games organizers”.

#### **Transport**

- The organizers have a strategy offering free rides on public transport to spectators holding Olympic event tickets— the free public transport service will be offered before the games commence and until the closure of the Paralympic Village, amounting to a total of just over 50 days.
- A total of 3,060 petrol-powered cars, minivans and small buses will be deployed which the organizers say will meet modern emission control standards.



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联合国环境规划署



- Of the fleet of almost 2,300 coaches and buses being deployed during the Games, the organizers say 400 will be natural gas-powered with the rest diesel. All will have less than 10,000 km on the clock or will be newly registered.

The report says: “UNEP applauds the introduction of 400 natural gas-powered buses to the Olympic fleet but feels there is considerable room for improvement in the petrol-powered small vehicle fleet, given the wide availability of cleaner fuel vehicle options”.

### **Water and Waste**

- Substantial investments have been made in water and sewage treatment, rainwater harvesting and intelligent irrigation systems.
- For example permeable blocks make up much of the paving at the Fengtai Softball venue. These allow rainwater to seep through to water collection systems underground.
- In the Olympic Media Village, at least 3,000 cubic metres of rainwater can be captured using water permeable bricks, pipes and wells installed on roofs, roads and green areas.
- The organizers have set a target of achieving a 50 per cent recycling of waste including paper, metals and plastics at venues. A test run, carried out during the 11<sup>th</sup> World Softball Championships held last year, achieved a nearly 90 per cent recycling.

The report says: “One of UNEP’s concerns however is that the current emphasis is on waste processing rather than waste minimization. Programmes have been developed, such as the ‘Cup of the Cup’ of the 2006 FIFA World Cup, to minimize waste by promoting re-usable cups”.

### **Environmentally Friendly Materials and Ozone-Depleting Chemicals**

- The organizers have made extensive use of a wooden and recycled plastic composite for decorating facades, lining floors and making window shutters and picnic tables in order to reduce demand for timber.
- The organizers have made what UNEP has described as an “extraordinary achievement” of avoiding chemicals that damage the ozone layer at Games facilities and venues and in equipment such as air conditioning and refrigeration units and fire fighting equipment.



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联合国环境规划署



- Carbon tetrachloride and methyl chloroform - two further ozone-damaging substances - have been prohibited for uses such as laundry and electronic circuit board cleaning.
- Suppliers such as Coca Cola and McDonald's have committed to an ozone-friendly Games. For example Coca Cola will supply 4,000 bottle coolers that use natural refrigerants.

### **Landscaping and Forestry**

- The organizers have made landscaping a priority at venues, specifically the Olympic Green where green landscaped areas, including the planting of drought-resistant and indigenous species, cover just over 900 hectares out of a total of around 1,160 hectares.
- A more than 580 hectare Olympic Forest Park has been established in the city landscaped with hills and water features. It will be protected, serving as a 'green lung' for the surrounding boroughs and the Olympic Village which will become a residential area after the Games.

### **Marketing, Education and Communication**

- The organizers have been spreading the 'Green Olympics' concept through a variety of measures in cooperation with the government ministries, the city council, environmental groups, schools, the private sector and local communities.
- Over 550 schools including 200 in Beijing have so far been nominated as Olympic Model Schools where Olympic values including the environment are being promoted.
- Primary schools in Beijing are taking part in 'Reserve a Barrel of Water this Summer' to promote water saving.
- BOCOG has other awareness initiatives including the Green Community and Green Home campaign to promote environmental understanding in households and communities.
- Another is the travelling "Close to Nature Hand in Hand with Fuwa Exhibition" that is promoting awareness about the living environment and the habitats of the four animal-like Olympic mascots or Fuwa—the fish, the Tibetan antelope, the flying swallow and the panda.

The report says that UNEP believes that a great deal more environmental awareness could be generated in the country and for visitors attending the Games, including incorporating the messages of the mascots on the Green Olympics website.



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### **Notes to Editors**

The UNEP report follows a memorandum of understanding between the organization and BOCOG in 2005 in which UNEP offered assistance to achieve an environmentally friendly games.

In 2007 Jacques Rogge, President of the International Olympic Committee (IOC), agreed that UNEP should conduct a wide-ranging evaluation of the Beijing Olympics' status in achieving this.

The report, whose findings have been shared with the IOC and the BOCOG, is based on a review of studies and technical assessments by the organizing committee and the Chinese authorities. It is also based on field visits to China by UNEP in 2007 and, as previously noted, liaison with relevant NGOs.

### **For More Information contact**

Eric Falt, Director of the UNEP Division of Communications and Public Information, at tel: +254 733682656.

Nick Nuttall, UNEP Spokesperson, at tel: +254 20 762 3084, mobile: +254 733 632755, or e-mail: [nick.nuttall@unep.org](mailto:nick.nuttall@unep.org)

Anne-France White, Associate Information Officer, at tel: +254 20 762 3088, or e-mail: [anne-france.white@unep.org](mailto:anne-france.white@unep.org)

Wenjuan Zhang, UNEP China Office, at tel: +86-10-85320921, or e-mail: [unep@public.un.org.cn](mailto:unep@public.un.org.cn).



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### **Notes for editors: UNEP's Sport and Environment Programme**

UNEP started its work on sport and the environment in 1994. The programme's objectives are to:

- Promote the integration of environmental considerations in sports;
- Use the popularity of sports to promote environmental awareness and respect for the environment among the public, especially young people;
- Promote the development of environmentally friendly sports facilities and the manufacture of environmentally friendly sporting goods.

The International Olympic Committee (IOC) is a key partner in UNEP's sport and environment strategy. UNEP and the IOC have been working together since 1994, when they signed an Agreement of Cooperation to incorporate environmental issues in Olympic Games. The IOC subsequently established a Sport and Environment Commission to advise its Executive Board on environmental issues as they relate to the Olympics. UNEP is represented in the Commission.

In 1999, UNEP collaborated with the IOC in developing an Agenda 21 for Sport and the Environment, which is currently being implemented by members of the Olympic Family and by several other sport organizations.

In 2007, IOC President Jacques Rogge and the IOC received the UNEP 'Champions of the Earth' award in recognition of the IOC's efforts to emphasize environmental sustainability as a core element of the Olympic Games.