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# ІСТОРІЯ, ПСИХОЛОГІЯ, ПРАВО, СОЦІОЛОГІЯ І ФІЛОСОФІЯ У СФЕРІ ФІЗИЧНОГО ВИХОВАННЯ І СПОРТУ

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## SUSTAINABILITY AND LEGACY OF BEIJING'S 2008 OLYMPICS

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**Анотація.** Зазначено, що, незважаючи на суперечності під час організації та проведення змагань чотириріччя, Китай успішно використав Олімпійські ігри в Пекіні для поширення ідей сталого розвитку, позитивних змін у культурі, економіці та охороні навколишнього середовища. *Мета.* Визначення спадщини Ігор XXIX Олімпіади в Пекіні у 2008 р. та їх впливу на сталий розвиток країни. *Методи.* Аналіз наукової літератури, методи порівняння та аналогій. *Результати.* Олімпійські ігри в Пекіні допомогли висвітлити наукові досягнення та продемонструвати економічний потенціал Китаю. Олімпійська спадщина Ігор полягає у створенні різноманітних економічних та соціальних можливостей, що прискорили трансформацію Пекіна, який став більш привабливим містом для бізнесу та сталого розвитку. Країна використала олімпійський успіх, щоб зміцнити свої позиції на світовому ринку не тільки завдяки чудовим спортивним досягненням, майстерній організації змагань та вражаючюю інфраструктурою, а й завдяки демонстрації захоплюючої культури, залучення великої кількості волонтерів та впровадження новітніх технологій. Незважаючи на певні екологічні проблеми, які виникли під час будівництва олімпійських споруд, перебільшення будівельних потужностей та нераціональне використання деяких спортивних об'єктів, загальний вплив Олімпіади на розвиток громадської інфраструктури Китаю мав позитивний характер. Проекти, пов'язані з Іграми XXIX Олімпіади в Пекіні у 2008 р., не лише створили нові робочі місця, а й сприяли залученню найкращих вітчизняних та зарубіжних фахівців з метою поліпшення архітектури міста, покращення транспортної системи та навколишнього середовища, та, як наслідок, Ігри залишили позитивну спадщину у місті та країні, що вплинула на подальший розвиток бізнесу та туризму. Проведення Ігор XXIX Олімпіади сприяло формуванню позитивного іміджу країни на світовій арені, а також дало змогу продемонструвати та втілити новітні технології, в тому числі з охорони довкілля.

**Ключові слова:** Ігри XXIX Олімпіади, сталий розвиток, навколишнє середовище, олімпійська спадщина.

**Abstract.** The purpose of the study is to determine the legacy of the Games of the XXIX Olympiad in Beijing in 2008 and their impact on the country's sustainable development. The article states that, despite the controversy during the organization and holding of the Games, China has successfully used the Olympic Games in Beijing to promote the ideas of sustainable development, positive changes in culture, economy and the environment protection. Methods of research: analysis of literature, methods of comparison and analogies. The Beijing Olympic Games helped to highlight scientific achievements and demonstrate China's economic potential. The Olympic heritage of the Games consists in creating a variety of economic and social opportunities that have accelerated the transformation of Beijing, which has become a more attractive city for business and sustainable development. The country used the Olympic success to strengthen its position on the world market, not only due to its excellent sports achievements, skillful organization of competitions and impressive infrastructure, but also through the demonstration of exciting culture, the involvement of a large number of volunteers and the introduction of the latest technologies. Despite certain environmental problems that arose during the construction of the Olympic facilities, exaggerated construction capacity and inappropriate use of some sports facilities, the overall impact of the Olympics on the development of public infrastructure in China was positive. Projects related to the Games of the XXIX Olympiad in Beijing in 2008, not only created new jobs, but also helped to attract the best domestic and foreign specialists in order to improve the city's architecture, transport system and the environment. They left a positive heritage in the city and country that has influenced the further development of business and tourism. The Games of the XXIX Olympiad contributed to the formation of a positive image of the country on the world stage, as well as allowed to demonstrate and implement the latest technologies, including those related to environmental protection.

**Keywords:** Games of the XXIX Olympiad, steadfast development, environment, Olympic legacy.

**Introduction.** China's recent remarkable economic achievements have earned it considerable respect as a global power with the fastest growing economy and holding the largest foreign reserves. As a consequence of economic success, the 2008 Olympics were offered to Beijing because the city had built sufficient infrastructure and accumulated resources to make the event magnificent. The Games helped to display remarkable achievements and to demonstrate China's potential for greater success. As a contribution, the Olympics created various business and job opportunities and catalyzed transformation of Beijing into a favorable destination for business and sustainability.

China used the Olympic success to bolster its soft power not just by excellent athletic performance, skillful event management and impressive infrastructure, but also through fascinating culture, cheerful volunteers and implementing new technologies.

The modern Olympic movement has extensive experience in solving environmental problems. Significant factual material on the state and prospects for the development of environmental activities is contained in the IOC newsletters, in particular the documentation of the IOC Sustainability and legacy commission, as well as articles, speeches, interviews with the media of the leaders of the Olympic Movement (J. Rogge, 2010; P. Schmidt, 2013; T. Bach, 2016). However, the research does not implement a systematic approach to the analysis of environmental activities in the process of organizing and hosting the Olympic Games at different historical stages in certain countries.

The socio-economic, organizational, legal and cultural aspects of hosting the Games of the XXIX Olympiad in Beijing in 2008 are rather detailed in the works C. Chang, 2008; D. Gardner, 2008; K. Cheung, 2010; H. Preuss, 2009; A. Tucson, 2008; J. Yardley, 2008; E. Evdokimov, 2010; Zh. Di, 2011.

Organizing committee of Games of the XXIX Olympiad in Beijing in 2008 chose three major directions, such as High-tech Olympics, Peoples Olympics and Green Olympics for implementing innovations, human rights and environmental issues. Besides using great green technologies at sports arenas, Olympic inspiration and pressure propelled China past the US as a global leader in clean energy innovations. While China remains the largest greenhouse emitter and needs to extend the campaign well beyond Shanghai Carbon-free Expo, its campaign deserves wider emulation. Mainstreaming environmental protection programs, energy-efficient and green technologies, closing heavily polluting firms, capping emission levels, conserving and expanding green belts are beneficial and sustainable measures.

The relevance of the research is to highlight of the most effective green initiatives undertaken by

the Organizing Committee of Games of the XXIX Olympiad in Beijing, and their influence on sustainable development of the country and the following XXIV Winter Olympics in Beijing in 2022.

**Aim of the research** is to analyze the legacy of the Beijing's 2008 Olympics and its impact into the sustainability of the country.

**Methods.** Literature analysis, retrospective analysis, comparison methods and analogies.

**Results and discussions.** The Beijing Organizing Committee of the Olympic Games (BOCOG) aim was deliver a "Green Olympics" to the world. Beijing's 2001 Bid Candidacy Report enumerated 20 Bid Commitments that would achieve this, including: the "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; and the promotion of public transportation and clean fuel vehicles in the Olympic transport system" [8]. There were achievements and challenges. According to a pre-Games assessment by Greenpeace China, BOGOG's positive results include "the introduction of state-of-the-art energy saving technology in Olympic venues – for example the Olympic Village will show case various technologies such as solar hot water, geothermal, and solar photovoltaic (PV) systems and 20% of the Olympic venue electricity used during the Games will be purchased from clean wind sources supplied by the Guanting wind power station, Beijing's first wind power generation station" [4]. However, GC was disappointed that Beijing did not "make environmentally-friendly policies for the Games in the areas of procurement and construction binding...[and] make environmental data and certification of Olympic venues fully transparent"[4].

According to a Weiler J., Mohana A. (2010), a key driver of environmental sustainability at earlier Olympiads (i.e., Lillehammer and Sydney) is the cultivation of a relationship between OCOGs and NGOs early on in the candidate city's bid process [5]. However, UNEP found that "the greatest problem in Beijing's attempt at hosting a Green Games is the limited engagement and minimal third party assessments of its environmental efforts" [5].

Over-spending and under-utilization has long been a footnote to the grandeur of the Olympics, but Beijing set about to break the mold by learning from the past, and planning well in advance. While spending by China in 2008 was by far the most ever showered upon an Olympics – an estimated \$42 billion [3], or about 10 times the Athens expenditure – Beijing looks certain to break even on nearly every one of its Olympic arenas. How it achieved this astounding efficiency isn't all due to astute planning. Beijing offered a rare urban land-

scape. Much spending was on big-ticket items like an expansion of the subway system, improvements that were needed even if the Olympics had not been held in China. Other funds bankrolled various environmental measures, as Beijing strove to host the greenest Olympics ever.

The Olympic drive also provided an opportunity for infrastructure development, environmental improvements and 13 city transformation leading to a better reputation supportive of Beijing's business and tourism.

China having surpassed the US as the largest green-house gas emitter by 2007, pollution became a serious threat against Beijing Games. As Yardley (2008) notes, Beijing's heavy pollution caused by massive industrial activities raised concerns and doubts over the city's ability to reach a required level of air quality. As some athletes pondered skipping the Games, Beijing vigorously implemented a combination environmental management measures to reduce air pollution. Intensive tree planting, factory closures and relocations and demobilisation of 1.3 million vehicles achieved desired air quality just in the nick of time for the Games to avoid an Olympic embarrassment.

In terms of Olympic-related infrastructure, transport system development and management, the Beijing Games were successful. Besides stimulating urbanisation and increased employment opportunities, the Games attracted contributions of the Overseas Chinese not only as private investors but also through donations and public-private partnerships. Apart from the Olympic village, up to 37 stadiums, gymnasiums and courts were constructed or refurbished and equipped. Coupled with the actual success of the Games; the majestic airport and magnificent Bird's Nest; unique Water Cube and Beijing Capital Museum; National Grand Theatre and the New CCTV Tower have greatly contributed to Beijing's landmarks, attractiveness and reputation. They provide an enduring legacy of the most lavish Games in the Olympic history.

Beijing reached or exceeded its ecological goals as neatly as it launched a new era of more efficient Olympics facilities. Nearly \$2 billion was spent to build 12 permanent and 8 temporary venues for the Olympics [1]. Some of these facilities were even more overdue than the subway expansion, guaranteeing that they would remain in use long afterwards. With a population of about 15 million, metropolitan Beijing depended on its old Worker's Stadium to serve big events, like Asian football (or soccer). The 40,000-seat stadium is cramped and lacks modern boxes, but it was the biggest and best Beijing had to offer [2].

Hence, plenty of pent-up demand greeted the construction of the Bird's Nest, as the exquisitely

designed new National Stadium from Herzog & De Meuron Architekten AG has been dubbed. Chinese sports clubs and civic groups are lining up to book the state-of-the art 91,000-seat stadium.

That iconic facility has become world famous, but practically all other Olympics stadiums have been well received and fill immediate needs in Beijing. Many were built alongside existing universities, where they are already becoming integrated into campus facilities. The wrestling venue became a 6,000-seat gymnasium for the China Agricultural University, while the 6,900 seat badminton gym was turned over to Beijing University of Technology [7]. In coastal Qingdao, the Olympics boating facilities were converted into a public marina and government school for sailors.

Such smooth transitions should not minimize the extent of Beijing's pre-Olympics planning. Practically from the day China won its bid in 2001, the government set about to ensure that its Olympics legacy was unique.

The best example is probably the press center and broadcasting building, which not only served 21,000 journalists, but also hosted fencing and shooting events. That was during the Olympics. Now, it starts its new life as the China National Convention Centre, with some of the top exhibition facilities in the country. With the addition of hotels and shopping, it became a trendy new tourist and business center in the Chinese capital [7].

Other savings were registered across the board as Olympics facilities endeavored to achieve energy efficiencies under Beijing's goal of hosting the greenest Olympics ever. The evocative Water Cube, as the National Aquatics Center was dubbed, features an unique exterior of thousands of plastic bubbles. These perform miracles of insulation, using natural sunlight to heat the pool, reducing energy needs by 30 percent - about as much as if the entire roof was covered in photovoltaic cells [2]. The Water Cube also collects and recycles rain water (fig.1), as do many Olympics facilities. Solar panels in the Bird's Nest generate enough energy to power lights for the underground parking lot.

Another factor in Beijing's 2008 Olympic success was the level of coordination and unity over seven years of planning and construction. Engineering firm Arup was behind practically all the Olympic facilities. That helped them tie all the facilities together with an underground road system that not only sped transportation and emergency access, but allowed for coordination of parking, reducing the need for spaces in individual arenas.

Perhaps the best example of confluence between making facilities pay for themselves and realize green savings comes at the athlete's village. Housing for 16,000 athletes was designed from the start



Figure1 – The Water Cube installation at Beijing 2008 Olympics

as luxury apartments, complete with the kinds of services – from restaurants to laundry – that are rare in Beijing. As a result, all the apartments sold out well ahead of the Olympics, at prices ranging from \$3000-\$4500 per square meter, high even in the booming Beijing market [1].

Besides the convenience and quality, the apartments offer another attraction in the location, another within a 580-hectare green belt erected for the Olympics. Given the high levels of pollution in Beijing, residents were keen for housing in the park-like setting, and willing to pay an Olympic premium for it.

Beyond stimulating production and consumption of relevant construction materials like cement, glass and steel, the Olympic-induced infrastructure development provided employment, sustained the growth of Beijing and exposed China's potentials to the world. Despite displacements to create room for Olympic venues; abuses of some construction workers; and underutilization of some impressive buildings, the overall Olympic impact on China's public infrastructure development has been positive, beneficial and enduring. Not only did the Games-related projects create jobs and engage top domestic and foreign talents, they also transformed Beijing's skyline with some celebrated architecture; improved its transport system and environment; and generally left a positive legacy on the host city and nation conducive for business and tourism.

#### Conclusions.

1. The main directions of the sustainability and legacy of the 2008 Beijing Olympics were defined

as a result of retrospective analysis. Weeks in the staging, but nearly a decade in the planning, the legacy of these Olympic Games is likely to be far more long lasting than the TV images. China not only excelled on the tracks and in the stadiums, but showed with the right attention to detail behind the scenes, a grand Olympics can also be green and pay dividends for the host community for years to come.

2. The 2008 Beijing Olympics were ardently sought, lavishly staged and hugely successful, despite intense scrutiny, speculation and setbacks. Amplified by modern media, most controversies revolved around China's political repression, epitomized by Tibet brutality. Resultant protests threatened boycott and terror, putting internal cohesion, national image and Olympic dream at stake. This study argues that despite controversies and setbacks, China successfully used the Beijing Olympics as a tool of sustainable development with a positive impact on its culture, economics and environment.

3. Environmental initiatives that were analyzed in the research and introduced during the Games of XXIX Olympiad have had high efficiency and positive impact on the legacy of the city. The Games helped China to portray a successful national brand image as an emerging global power with growing influence, despite some problem areas. Hosting the Games was a consequence of China's economic success, showcase of remarkable achievements, and signal for environmental changes.

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