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### RESEARCH ON THE IMPACT OF THE BEIJING WINTER OLYMPICS ON THE SUSTAINABLE DEVELOPMENT OF WINTER SPORTS IN CHINA

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#### Abstract

In March 2022, the Beijing Winter Olympics and the Winter Paralympics were held successfully. During the special period of the COVID-19 pandemic ravaging the world, the great value of the successful hosting of the Beijing Winter Olympics has been recognized by the world. Before Beijing's successful bid to host the Winter Olympics, winter sports had developed well in northeastern China. Compared with Europe and North America, the development of winter sports had significant shortcomings. Moreover, most winter sports industry was concentrated in the northern region, and the industrial scale and management model were relatively underdeveloped. There was a shortage of winter sports venues, the competition conditions of the venues were far from the international competition standards, the maintenance and management of venue facilities mainly relied on foreign technical support, and most of the winter sports equipment was manufactured overseas. There was a severe shortage of reserve talents for various winter sports programs. However, after the Beijing Winter Olympics, the Chinese government issued a series of policies to promote the development of winter sports. This paper uses the literature method, expert interview method, field inspection method, logical analysis method, and other research methods to deeply analyze the Beijing Winter Olympics' impact on China's winter sports competition level, the development of the winter sports industry, the construction of winter sports venues, spread of winter sports culture, the training of various types of winter sports talents, the manufacture of winter sports equipment and high-tech winter sports. This paper put forward reasonable countermeasures and suggestions for the sustainable development of all aspects of winter sports in China to help winter sports to flourish in China.

#### Keywords:

*Beijing Winter Olympics, winter Sports in China, sustainable development*



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### Introduction

In March 2022, the Beijing Winter Olympic and Paralympic Games ended wonderfully. Looking back to the arduous preparation of the games, more than 3,000 tasks covering 57 fields were planned and raced against time. Beijing and Zhangjiakou wrote the chapter of an era of "green, inclusive, open and clean" and presented to the world an Olympic and Paralympic with "splendid" and "eternal in warmth", injecting strong confidence and strength into the world plagued by the Covid-19.

Since then, the Beijing Winter Olympics' successful holding has driven the rapid development of winter sports in China. Compared with developed countries in Europe and the United States, China's winter sports started late. Moreover, due to geographical constraints, the development is uneven. Before Beijing's successful bid for the Winter Olympics, winter sports were more developed in Northeast China but less in the south. Most of the winter sports industry was concentrated in the north, but the industrial scale and management model were less developed. There was a shortage of winter sports venues, and the competition conditions of the venues were far from the international competition standards, and most of the maintenance and management of these venues and facilities relied heavily on foreign technical support. Most winter sports equipment was manufactured abroad, and there was a severe shortage of reserve talents for various winter sports. In 2015, after the successful bidding of the Beijing Winter Olympic and Paralympic Games, the Chinese government introduced a series of policies, including "engaging 300 million people in ice and snow activities", "winter sports on campus", etc., to encourage vigorous development of winter sports across the country. The 2022 Beijing Winter Olympics offered a chance to China to make outstanding achievements in several domains, including the competition level of winter sports, the development of the winter sports industry, the construction of international winter sports competition facilities, spread of winter sports culture, the training of winter sports talents, the manufacture of winter sports equipment, and high-tech Winter Olympics. This paper analyses the achievements made in the development of winter sports in China, puts forward reasonable countermeasures and suggestions for the sustainable development of all aspects of winter sports in China, and attempts to strengthen the vigorous development of winter sports in China.

### Methods

This paper uses the literature method, expert interview method, field inspection method, logical analysis method, and other research methods to deeply analyze the far-reaching impact of the Beijing Winter Olympics on China's winter sports competition level, development of the winter sports industry, construction of winter sports venues, spread of winter sports culture, training of various types of winter sports talents, winter sports equipment manufacturing, and high-tech winter sports. This paper provides reasonable countermeasures and suggestions for the sustainable



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development of all aspects of winter sports in China and helps winter sports in China flourish.

### Result

1. The Beijing Winter Olympics promotes popularization and development of the winter sports in China

"300 million people participating in winter sports" is the most significant impact the Beijing Winter Olympics have on China's winter sports. Before Beijing's bid to host the Winter Olympics, China's winter sports resources were strong in the north and weak in the south, the level of winter sports was not high, public participation was low, and the foundation of the winter sports industry was weak. The Beijing Winter Olympics brought good opportunities for developing winter sports in China. According to the report of the National Bureau of Statistics, from 2015 to October 2021, the number of Chinese residents who participated in winter sports reached 346 million, and the participation rate in winter sports was 24.56%, which achieved the grand goal of 300 million people on ice and snow perfectly.

The successful hosting of the Beijing Winter Olympics has extensively promoted the development of winter sports in China. Since Beijing successfully bid for the Winter Olympics in 2015, China Winter Sports has made an overall layout and development with the goal of "participating in all events" and "engaging 300 million people in ice and snow activities". At the Beijing Winter Olympics, for the first time, the Chinese Olympics delegation achieved "full participation in 7 major sports and 15 disciplines" in the Winter Olympics. At the Winter Olympics, China's young winter sports athletes emerged, and veterans continued to write legends. The complex movements were frequent. After the athletes' hard work, they won a total of 15 medals, including 9 gold, 4 silver, 2 bronze, the best record of China's participation in the Winter Olympics. During preparation for the Winter Olympics, the national policy of "extending to the south and to the west, expanding to the east" has rapidly improved the level of competition in winter sports in China, effectively expanding the territory of winter sports.

2. The Beijing Winter Olympics promote the rapid development of the winter sports industry in China

The participation of 300 million people in winter sports has driven the explosive development of the winter sports industry in China and offered a new direction for regional economic development. Beijing and Zhangjiakou, as the core areas of the Winter Olympics, have built infrastructures such as the Beijing-Zhangjiakou High-speed Railway, Beijing-Chongli Highway, international standard competition venues, and facilities. In the post-Winter Olympics period, Beijing, where two Olympics were held, and Zhangjiakou Chongli, a famous city for the Winter Olympics, entered a new stage of rapid economic development. Other popular



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and Peace

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regions such as Jilin Province and Xinjiang Altay have also actively followed up and vigorously developed the ice and snow economy. Jilin Province continues to promote the theme activity of "Winter Olympics in Beijing, Experience in Jilin", and jointly builds the "Changbai Mountain-Altai Mountains Ice and Snow Economy High-quality Development Pilot Zone" with Xinjiang, which has become a model for the development of ice and snow economy outside the core area of the Winter Olympics. All provinces have actively responded to the national call. At present, the development of winter sports has become an essential part of the "14th Five-Year Plan" for many provinces across the country. With the holding of the Winter Olympics, public participation in winter sports has brought more revenue. The traditional winter sports resource development model dominated by ice and snow tourism has developed into a diversified new system with a complete chain of "ice and snow +" and an ice and snow economy centered on ice and snow tourism, ice and snow culture, etc.

### 3. The Beijing Winter Olympics drives the construction of winter sports venues

During the preparations for the Beijing Winter Olympics, the number of ice and snow venues across the country increased significantly. From 2018 to 2021, the investment in large-scale winter sports projects built in China is nearly one trillion yuan. The "three north" regions, Northeast China, North China, and Northwest China, accounted for 47.9% of the investment, and the remaining four regions, such as Southwest China, South China, Central China, and East China, accounted for 52.1% of the investment. As of January 2021, there are 654 standard ice rinks and 803 indoor and outdoor ski resorts in China, covering 30 provinces, of which 36 indoor ski resorts have been put into operation, ranking first in the world. The three largest indoor ski resorts are all in China. As the construction of the Beijing-Zhangjiakou sports and cultural tourism belt accelerated, some traditional industrial cities have been transformed into "ice and snow cities" by taking advantage of the Winter Olympics. Furthermore, technology has assisted the construction of Olympic venues. China has achieved full coverage of green electricity for the first time in the Olympic Games history. The National Speed Skating Stadium is the first one in the world to adopt ice-making technology with nearly zero carbon emissions.

### 4. The influence of the Beijing Winter Olympics on the winter sports culture in China

Beijing not only presented a wonderful feast of ice and snow to the world but also stimulated the enthusiasm of the general population across the country to participate in winter sports through the Winter Olympics. Many schools actively promote Olympic knowledge. Currently, 835 Olympic education model schools have been verified nationwide, and the Olympic values are widely spread among the young population. Winter sports athletes such as Gu Ailing and Su Yiming are becoming new idols of the younger generation, leading the development of winter sports in



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for Development  
and Peace

## The 5th International Conference of Sport for Development and Peace in Collaboration with 2022 International Conference of Sport History and Culture

China. During the preparation of the Winter Olympics, a series of cultural products such as Winter Olympics logos, songs, film and television works, micro-videos, and licensed products emerged one after another. "Bingdundun" and "Xue Rongrong" are even more popular worldwide, becoming national-level cultural IPs, which reflects China's solid soft power. The Winter Olympics venues, Cultural Square, International Olympic Academy, and Ice and Snow Museum will serve as facilities to enrich the winter sports culture supply and will continue to be open to the public in the post-Winter Olympics period. The Beijing Winter Olympics enabled athletes from all over the world to perfectly interpret the Olympic motto of "Faster, Higher, Stronger - More Unity" and the Paralympic values of "Courage, Determination, Inspiration, Equality" in intense competitions.

5. The Beijing Winter Olympics will accelerate the cultivation of high-quality winter sports talents

All kinds of talents are necessary factors for the success of the Winter Olympics. Before the Olympic bid, most of China's professional winter sports talents were concentrated in the three northeastern provinces, and many sports fields lacked sufficient personnel. With the strategy of "north ice moving to the south, expanding to the east and the west," winter sports talents have flowed across the country, which has extensively promoted the development of winter sports across the country.

Since Beijing's successful bid for the Winter Olympic and Paralympic Games in 2015, China has selected and trained outstanding referees nationwide to participate in the refereeing work of the Winter Olympics. In this Winter Olympic and Paralympic Games, nearly 2,000 NTOs directly participated in organizing and operating various competitions, providing a sufficient guarantee for the event. This is the first batch of well-trained professionals in China with experience in top international competitions, laying a solid foundation for hosting more World Cups and even World Championships of winter sports in China. The NTO team will be the most important legacy of the Beijing Winter Olympics and Paralympics.

At present, winter sports for the public are gaining initiatives, and winter sports schools and Olympic education demonstration schools are becoming necessary guarantees for the future sustainable development of the winter sports market. As an essential part of the implementation of the goal of "engaging 300 million people in ice and snow activities", "winter sports entering schools," and "adolescents participating in ice and snow activities" have been carried out nationwide. Nearly 3,000 "winter sports schools" and more than 800 "Olympic education demonstration schools" have been built nationwide. China plans to build 5,000 "winter sports schools" by 2025. The participation of the younger population in winter sports will bring momentum to the future sustainable development of the winter sports market.



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for Development  
and Peace

## The 5th International Conference of Sport for Development and Peace in Collaboration with 2022 International Conference of Sport History and Culture

### 6. Science and technology enables the rise of winter sports equipment manufacturing industry

The Beijing Winter Olympics led to the rise of the winter sports equipment manufacturing industry. Before the Winter Olympics, China's winter sports equipment manufacturing industry depended almost entirely on imports. Now it is gradually turning to independent research and development, and the level of localization of winter sports equipment manufacturing continues to improve. Snow crushers and other field equipment fill the domestic gap, and racetrack monitoring equipment such as ice and snow hardness and particle size measuring instruments have been localized. The preparations for the Winter Olympics have vigorously promoted the innovation mechanism of winter sports technology research and development. It also enabled technological innovation and model innovation in unique scenarios of the Winter Olympics, such as weather forecasting, track and venue construction, operation and maintenance, sports skill optimization, training base construction, and 8k digital broadcasting. It contributed to the development of the ice and snow economy in China. The realization of the goal of "300 million people participating in winter sports" also promotes the sustainable development of sports apparel and winter sports equipment manufacturing industries in China, enabling "Made in China" and "Made in China" to shine brightly in the Winter Olympics.

### Discussion

#### 1. Countermeasures for the development of winter sports in the post-Winter Olympics period

In the post-Winter Olympics period, the development scale of winter sports should be expanded, the organizational structure should be optimized through strategic cooperation, joint training, and other modes, and the construction of a three-level training system for winter sports should be strengthened to improve the efficiency and quality of winter sports talent training. There should be an integration of teaching and learning, in-depth promotion of winter sports into the campus activities, the establishment and improvement of the winter sports curriculum system, assessment and evaluation system, and competition system throughout the primary school to the university, and continuous winter sports reserve talent training. The proposal of "talent transfer in sports" not only enriched the pool of winter sports talents but also broke the "project barriers" in the development of winter sports, providing strong support for the development, team building, training, and competition of Chinese winter sports. Policies should promote technology empowerment and build the core competitiveness of winter sports. Moreover, policies should also improve the government efficiency, further optimize the structure, build a higher-level public service system for national winter sports, connect the development of winter sports with the enhancement of people's physique, meet people's beautiful pursuit of winter sports, and at the same time



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## The 5th International Conference of Sport for Development and Peace in Collaboration with 2022 International Conference of Sport History and Culture

connect winter sports and economic, social, and ecological civilization, so that there could be collaborative innovation and development.

### 2. Countermeasures for the development of the winter sports industry

In the post-Winter Olympics period, China should formulate national-level ice and snow economic development strategies and plans, strengthen characteristic development and dislocation competition, and clarify critical directions and breakthroughs for short-, medium- and long-term development. Policies should improve the industrial chain, build local high-end winter sports equipment brands, and enhance international competitiveness by improving existing ski venues, facilities and equipment rental, and derivative tourism. China should also deepen the supply-side structural reform of the ice and snow economy, promote the integrated development of ice and snow tourism, equipment, and education, build a modern ice and snow economic system with Chinese characteristics, and promote the in-depth integration of the advantages of ice and snow resources with features such as summer recuperation, physical fitness, and national-border sightseeing, and create an integrated tourism economy. Policies should also support regional boutique tourism routes and form a new situation of balanced development throughout four seasons: spring, summer, autumn, and winter. At present, it is necessary to speed up the layout of a forward-looking institutional framework that adapts to the development of the modern ice and snow economy and fully opens a new chapter in developing the ice and snow economy in China.

### 3. Strengthen the construction of supporting facilities for winter sports venues

In the post-Winter Olympics period, China should resolve the transportation facilities shortage. Policies should strengthen the construction of aviation, railway, highway, and other infrastructures suitable for developing ice and snow tourism destinations and reduce the travel time cost of tourists. The second policy is to strengthen the construction of service quality of winter sports venues, meet the basic needs of winter sports participants, focus on consumer experience, build an experience-friendly service system, and improve security capabilities. Policies should also support local construction and renovation of winter sports venues that meet international standards and can host international events, improve winter sports consumption, and support measures. Cities could build name brands through international events, and the nation could lead in new economic growth by competing in global ice and snow economic development. China should also promote the opening of winter sports stadiums and school venues to the public and improve operational capabilities and comprehensive utilization.

### 4. Countermeasures for the development of winter sports culture

In the cultural aspect, policies should continue to promote Olympic knowledge in schools, spread Winter Olympic culture, and carry forward the Olympic spirit, so that the young population could cultivate patriotic feelings through typical cases of



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for Development  
and Peace

## The 5th International Conference of Sport for Development and Peace in Collaboration with 2022 International Conference of Sport History and Culture

athletes who work hard and win glory for China. The state should also promote the Olympic Games' tangible and intangible heritage and the culture of winter sports. China should support the construction of high-quality local development pilot zones for the ice and snow economy, explore the joint construction of cross-border ice and snow tourism cooperation demonstration zones, and actively encourage the “Belt and Road” nations to jointly develop an Ice and Snow Silk Road economy, and together create cross-border ice and snow tourism products and “internet celebrities” hotspot.

### 5. Cultivation of various talents in winter sports

China should continue to improve the training system for winter sports talents. Policies should strengthen the training of professional winter sports trainers and improve the quality of these trainers. China should strengthen the training of unique talents such as winter sports industry management professionals, winter sports stadium maintenance workers, and winter sports equipment researchers and developers, and establish a professional talent training system. The state should use the advantages of sports college resources to improve the winter sports instructor training system. Furthermore, policies should strengthen the training of winter sports reserve talents, increase policy support, encourage colleges and local sports departments to cultivate high-level competition talents, and at the same time keep the quality of continuous education and academic education for coaches and athletes and effectively ensure a smooth transformation from athletes to professional winter sports talents such as instructors, coaches, and referees.

### 6. Science and technology improve winter sports equipment manufacturing development

In the post-Winter Olympics period, China should continue the "High-tech Winter Olympics" policy, including jointly tackles the research and development of winter sports technology, strengthens independent brand building, and brand cultivation, and supports the development of winter sports equipment industry clusters. As the policy continues, more companies will invest in the research and development of winter sports equipment, the general population will gain more trust in domestic winter sports equipment, and China's winter sports equipment manufacturing industry will usher in a historic opportunity.

### Conclusion

The Beijing Winter Olympics has promoted the high-quality development of winter sports in China. In the post-Winter Olympics period, various heritages of the Winter Olympics should be used reasonably, and the spirit of the Winter Olympics should be carried forward. Policies should improve various talent training systems, improve the quality of talent training, and use technology to empower and enhance winter sports in China. The level of sports competition in China should be improved





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for Development  
and Peace

## The 5th International Conference of Sport for Development and Peace in Collaboration with 2022 International Conference of Sport History and Culture

to the international level, and we should improve international competitiveness. Policy guidance should also promote the high-quality development of the winter sports industry and the local winter sports equipment manufacturing industry.

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