



Development of Tourism Stock Resources under the Background of Dual Carbon Goal—Take Industrial Sites as an Example

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Abstract

With global warming, China has made a solemn commitment to the world to reach peak CO₂ emissions by 2030 and to work towards achieving carbon neutrality by 2060. In order to meet the domestic and international tourism demand, how to develop tourism resources and tourism activities under the guidance of the "double carbon" policy has become a hot topic of concern for tourism-related personnel. The author believes that revitalizing the tourism stock is an effective way to develop low-carbon tourism, among which the development of industrial sites has a more far-reaching significance. In this paper, three representative cases of industrial sites development are selected. The strategies of developing industrial sites are summarized by using literature research method, case study method and comparative summary method, which can provide reference for efficient and low-carbon tourism resource development activities in China and help tourism industry to shift from "incremental planning" to "stock planning".

Keywords

Industrial sites, dual-carbon background, sustainable tourism, tourism stock utilization

1. Background

1.1 Carbon peaking and carbon neutrality goals

In the early days of the industrial revolution, the concentration of harmful greenhouse gases in the air increased and global temperatures began to rise. Over the past century and a half, the global economy has continued to develop and the greenhouse effect has gradually increased, making global warming a common concern for people around the world. In 1992, the United Nations signed the United Nations Framework Convention on Climate Change, which requires developed countries to take measures to control greenhouse gas emissions first; in 2015, Convention and Paris Agreement was formally adopted to make arrangements for global action to address climate change after 2020. Arrangements. Against this backdrop, General Secretary Xi Jinping made a solemn commitment at the 75th session of the UN General Assembly that China strives to peak CO₂ emissions by 2030 and work towards achieving the goal of carbon neutrality by 2060.

The "double carbon" goal is an inevitable choice to achieve the sustainable development of the Chinese nation and a solemn commitment to build a community of human destiny. In order to achieve the "double carbon" goal, the State Council issued the "Opinions of the State Council on the Complete and Accurate Implementation of the New Development Concept to Achieve Peak Carbon and Carbon Neutral Work", which mentions that a green, low-carbon and cyclic economic system should be initially formed by 2025 to lay a solid foundation for peak carbon and carbon neutral development [1].

1.2 Tourism recovery after the outbreak

The tourism industry has been hit hard for three years since the 2019 New Crown pandemic, and the travel needs of the Chinese people have gone unmet for an extended period of three years. With the gradual lifting of quarantine measures, China's inbound, outbound and domestic travel will recover significantly.

With the full recovery of the tourism industry in China and the world by 2023, active tourism activities will inevitably lead to an increase in carbon emissions, and the question of how to conduct tourism activities in a low-carbon manner under the guidance of the "double carbon" target has become an urgent issue for tourism stakeholders.

1.3 The imperative of low-carbon tourism

Tourism is considered as a resource-saving and environment-friendly industry [2]. The World Tourism Organization and the United Nations Environment Programme reported that tourism is responsible for 5% of global greenhouse climate emissions, while contributing only 3% [3]. Global carbon emissions from tourism traffic could reach 1,998 million tons in 2030 [4].

Tourism is a key pillar industry that contributes to the high-quality development of China's economy, and with the recovery of tourism after the epidemic, carbon emissions generated from tourism development and tourism activities will continue to intensify. It is imperative to optimize the carbon source structure, low-carbon development of tourism projects, and sustainable tourism activities from the source.

2. Industrial site transformation - effective revitalization of tourism stock resources

In order to meet the huge demand for tourism, China needs to develop more quality tourism projects. In the context of the "double carbon" goal, the most important concept of developing tourism projects is to minimize human disturbance and avoid "big demolition and big construction". In addition to the development of ecotourism path, the revitalization of tourism resources is also an effective development path.

The State Council explicitly mentioned in the document to promote the renovation and transformation of idle and inefficient assets for the development of new functions such as leisure and tourism [5]. Industrial sites, old villages, abandoned mines and other stock resources have great development value, while revitalizing industrial sites can compensate to a certain extent for industrial carbon emissions since the mid-19th century, which has unique significance.

2.1 The meaning of industrial sites

Industrial sites are an important carrier to show the civilization and history of industrial era, and the development and reuse of industrial sites is a kind of inheritance of industrial culture, and the protection of industrial sites is to protect the diversity of urban culture and the history and culture of urban industry. When tourists experience the landscape of industrial sites, they can understand the history of urban development through the landscape and get a unique tourism experience. However, the quality of industrial sites tourism projects varies, and the projects available for visiting and experiencing are generally small, simple and poorly experienced.

Industrial heritage tourism is a new type of tourism based on industrial heritage, mainly through the preservation and transformation of machinery and equipment, plants and factories in industrial sites, so that they have a variety of functional attributes such as tourism and entertainment, allowing visitors to appreciate industrial culture and civilization. Industrial heritage tourism destinations are cultural tourism activities that intervene in the industrial heritage space, using the industrial landscape and industrial buildings in the original factory to form cultural consumption and tourism destinations around the industrial production history. As a comprehensive cultural tourism product, industrial heritage tourism destinations can meet the multiple value needs of consumers such as cultural consumption, leisure and entertainment, aesthetic nostalgia, and knowledge learning, and promote the enhancement of regional economic, social, cultural, and ecological values [6].

2.2 Research status at home and abroad

Foreign researchers continue the research related to industrial archaeology and industrial heritage conservation, and at the same time begin to expand into the dynamics of industrial heritage tourism development, the integration of industrial heritage culture and tourism, and the value and impact generated by industrial heritage tourism development.

Domestic scholars have mainly conducted research on industrial heritage resources and industrial heritage tourism development models. One is the identification of the value of industrial heritage tourism resources, and the research on the value of industrial heritage is conducive to alleviating the conflict between industrial heritage development and conservation. A coupled coordination degree model can be used to carry out holistic evaluation between the three dimensions of industrial heritage re-

source value, development and tourism [7]. Second, there is a correlation between the spatial distribution of industrial heritage resources and industrial heritage tourism development; for example, industrial heritage resources in the northeast are mainly distributed in the central belt, so industrial heritage tourism products should be connected to major industrial cities using a point-axis radiation development model [8]. Third, different types of industrial heritage resource types determine the direction of industrial heritage tourism development model, according to the characteristics of industrial heritage resources, China's industrial heritage tourism development model can be divided into professional, park, comprehensive and specific [9].

3. Case presentation

There are many excellent cases in the process of developing industrial sites, and reviewing these successful cases, we can gain valuable experience in developing industrial sites for tourism.

3.1 Hanyang Iron Works

The Hanyang Iron Works is the earliest government-run iron and steel enterprise in modern Chinese history. It has created glory and glory in its ups and downs, and has also gone through storms and vicissitudes, just like a microcosm of the modern Chinese foreign affairs movement, reflecting the hardships and twists of the nation.

In 2018, the Hanyang Iron Works was selected as the first batch of China's industrial heritage protection list. There are 17 existing buildings remaining on the former site of Hanyang Iron Works. Walking into the Hanyang Iron Works, people can experience the former glory of the Hanyang Iron Works in one site.

There are not many traces of the Hanyang Iron Works being developed, and most of the sites remain in their original form. Next to the Hanyang Iron Works is the Zhang Zhidong Museum, which can be considered a "Netflix" attraction, and many people come here to take a look at it. Zhang Zhidong Museum uses a narrative approach to describe Zhang Zhidong's achievements in modern industry, military, education and other aspects of his life.

3.2 Eling Yichang Cultural and Creative Park

The predecessor of the Eling Yichang Cultural and Creative Park was the Central Bank Banknote Printing Factory established in 1937. In 1953, the Goose Ridge II Factory officially became the Chongqing Printing II Factory, which used to be the color printing center of Chongqing and the color printing giant of the southwest printing industry.

In 2012, the Eling Yichang Cultural and Creative Park was closed for environmental and other reasons, and was later created as a cultural and creative park. The founders of Eling Yichang Cultural and Creative Park visited Providence Steel Works in the United States and the Port Mill in Adelaide, Australia, and turned Goose Ridge Two Factory into a gathering place for literary and artistic youth.

But what really made the Eling Yichang Cultural and Creative Park known to tourists nationwide was the fact that the movie "Passing through Your World" was set in Goose Ridge Factory and Hongya Cave. With the release of the movie, many of the scenes that appeared in the movie quickly became popular on the Internet and became netflix attractions.

3.3 Shougang Industrial Heritage Park

China Shougang Group was founded in 1919 as an important steel-making base in China. In February 2005, the National Development and Reform Commission officially approved the relocation plan of Shougang, which was completed by the end of 2010.

The industrial land left behind after the complete shutdown of Shougang was transformed into Shougang Industrial Heritage Park, which was selected to be on the list of the first Beijing Netflix hit spots. During the Winter Olympics, the Shougang Ski Jump was put into use, which brought Shougang back into the public eye. Now Shougang Park has become a "new business card" of Beijing, with science fiction industry, meta-universe, and intelligent networked cars moving into Shougang Park. Besides, two consecutive China Science Fiction Conferences held in Shougang Park in 2020 and 2021, making Shougang Industrial Heritage Park a science fiction industry gathering area.

4. Comparative analysis and inspiration

Through comparison, we can see that the excellent industrial site renovation cases all have one thing in common - the developers are good at extracting and condensing the original characteristics of the industrial sites and using them flexibly in the subsequent development.

Table 1. Comparison

Park Name	Original operation type	Extraction of elements	Remodeling Features
Hanyang Iron Works	Steel smelting	History of famous people	Taking the Hanyang Iron Works as a carrier, the Narrating the story of historical celebrity Zhang Zhidong
Eling Yichang Cultural and Creative Park	Printing House	Artistic heritage	Through film promotion, the Create an art base that young literary artists aspire to
Shougang Industrial Heritage Park	Steel smelting	High Technology	Carrying forward the spirit of Shougang. Create a modern high-tech industrial park

4.1 Taking culture as the nucleus to stimulate the intrinsic value of industrial sites

The Hanyang Iron Works is unique in that it is the first government-run iron and steel enterprise in modern Chinese history, and its founder was Zhang Zhidong, a famous minister of the late Qing Dynasty. Zhang Zhidong was a representative of the foreign affairs faction in the late Qing Dynasty, and the Hanyang Iron Works is one of the legacies of the foreign affairs movement. Standing in the Hanyang Iron Works and reviewing Zhang Zhidong's life makes you feel as if you have traveled back to the late Qing Dynasty, where he broke through internal and external troubles and pioneered the modernization of Chinese education and national defense.

4.2 Create an immersive experience and give rich value to the industrial site

Eling Yichang Cultural and Creative Park Originally was a printing factory, itself has a rich artistic heritage, the founder cleverly took use of this feature, combined with the film publicity, launched a reputation. Now Eling Yichang Cultural and Creative Park holds art exhibitions from time to time, and tourists go to punch in and take photos.

4.3 Science and technology to help and build a modern industrial sites and scenic spots

Shougang Industrial Heritage Park has always been a leader in science and technology. Many of China's "firsts" have come from Shougang Industrial Heritage Park, including the earliest 30-ton oxygen top-blown converter, the most advanced blast furnace "Shougang No. 2 Blast Furnace", and the first plant to be listed as a pilot unit of the national economic system reform. The first 30-ton oxygen top-blowing converter, the most advanced blast furnace "Shougang No.2 Blast Furnace", and the first plant to be listed as a pilot unit of national economic system reform... The Shougang Industrial Heritage Park is a modern high-tech industrial park that has been built in the spirit of Shougang.

5. Conclusions

5.1 Take culture as the core and stimulate the intrinsic value of industrial heritage sites.

Industrial heritage carries the historical memory and cultural precipitation of industries and cities. Industrial cultural resources can play a role in giving shape to industrial heritage sites and casting their souls. Excavating the unique cultural symbols of industrial heritage, integrating resources such as anecdotes of historical celebrities and historical relics, and telling good historical stories become the key to stimulate the intrinsic value of industrial sites. Only by making the static industrial heritage move in the storytelling, can the industrial heritage live in people's memory.

5.2 Create immersive experiences and give industrial sites rich value.

It is also a good way to develop industrial heritage sites with profound artistic heritage into a popular mecca for young people, using elements accepted by young people to make industrial heritage sites into immersive experience places and develop their artistic value. Cooperate with famous IPs, so that young people can experience the charm of industrial heritage in the process of punching cards, which strengthens the economic benefits and promotes industrial heritage culture, killing two birds with one stone.

5.3 Technology helps to create a modern industrial site scenic spot.

In September 2020, General Secretary Xi Jinping pointed out during his inspection of Hunan Cultural Industry Park that the integration of culture and science and technology, which can give rise to new cultural industries, extend the cultural industry chain and gather a large number of innovative talents, is a sunrise industry with great promise. Industry is developed with the help of technology. With the progress of technology, some factories no longer adapt to the current development trend and are

left in the time and space where they belong, becoming valuable industrial heritage. And now, using technology to empower the creation of modern industrial heritage scenic spots, visitors can feel the changes of the times and experience the mysteries of technology during their visit.

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