

# Conservation and Sustainable Development of World Cultural Landscape Heritage in Mount Wutai

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## ABSTRACT

As of June 2021, there are 114 cultural landscape heritage sites in the world, of which mountain landscape heritage accounts for about 17.5% of the total number of cultural landscape heritage sites in the world. China joined the World Heritage Convention in 1985, and now has a total of 55 heritage sites, including 5 cultural landscape heritage sites. 2009, Mount Wutai was listed as a World Cultural Landscape Heritage. This paper analyzes the World Cultural Landscape Heritage of Wutai Mountain, finds the shortcomings in the current tourism situation, tourism image perception, and transportation conditions, and puts forward targeted suggestions to protect and sustain the development of Wutai Mountain cultural landscape driven by tourism, and provides certain reference significance for other heritage sites.

**Keywords:** *World Cultural Landscape Heritage, Mount Wutai, Tourism Status, Conservation and Development.*

## 1. INTRODUCTION

The Convention for the Protection of the World Cultural and Natural Heritage was officially adopted by UNESCO in Paris in 1972, defining and classifying World Heritage in the form of a law and a convention, which is the fundamental law for the protection of World Heritage<sup>[1]</sup>. The concept of cultural landscapes was introduced at the 16th session of the UNESCO World Heritage Committee in Santa Fe, USA, in December 1992, and was incorporated into the World Heritage List<sup>[2]</sup>. Cultural landscapes represent "the joint work of nature and human beings", reflecting the role of human beings in the natural environment and the harmonious coexistence with nature<sup>[3]</sup>. At present, there are 114 cultural landscapes in the world, five of which are transboundary and three of which are also listed as endangered.

China's world heritage is rich in resources and complete in variety. At present, China has a total of 55 heritage items, which is tied with Italy for the first place in terms of the number of heritage items, among which, 14 are natural heritage items, 37 are cultural heritage items (including cultural landscape heritage), and 4 are dual cultural and natural heritage items. There are only 5 cultural landscape heritage sites (Mount Lushan National Park, Mount Wutai, Hangzhou West Lake Cultural Landscape, Honghe Hani Terraces Cultural Landscape, and Zuojiang Huashan Rock Art Cultural Landscape), accounting for about 9% of China's total world heritage sites. 2009, Mount Wutai was recognized by UNESCO as a World Heritage Site in the cultural landscape category. Wutai Mountain is a sacred Buddhist mountain and a national geological park with 41 cultural landscapes<sup>[2]</sup>, which have rich tourism value.

## 2. STATUS OF WORLD CULTURAL LANDSCAPE HERITAGE

There are 114 cultural landscape heritage sites in the world, located in 62 countries, and about 47% of the cultural landscape heritage sites are located in Europe. There are various types of cultural landscape heritage,

such as religious heritage, industrial heritage, mountainous landscape, etc. Mountain landscape heritage accounts for about 17.5% of the total cultural landscape heritage in the world. 8 mountain landscape heritage sites are selected from each continent and briefly introduced below.



**Figure 1.** World Cultural Landscape Heritage Distribution Map

**Table 1.** Introduction of mountain landscape heritage

Name	Country	Date of Inscription	Criteria	Features
Mount Wutai	China	2009	(ii)(iii)(iv)(vi)	Located at 113°33'48" E and 39°1'50" N. The core area is 18,415 ha and the buffer area is 42,312 ha. It is a national geological park and the first of the four famous Buddhist mountains in China.
Sacred Sites and Pilgrimage Routes in the Kii Mountain Range	Japan	2004	(ii)(iii)(iv)(vi)	Located at 135°46'35" E and 33°50'13" N, the core area is 506.4 ha and the buffer area is 12,100 ha. The main area is a fusion of Shintoism and Buddhism, witnessed by three Buddhist temples on Mount Takano, Mount Yoshino and Mount Kanamine.
The Madriu-Perafita-Claror Valley	Andorra	2004	(v)	Located at 1°35'44" E, 42°29'41" N, the core area is 4,247 ha. This canyon is a reflection of an ancient public system of land management that has existed for 700 years.
Val d'Orcia	Italy	2004	(iv)(vi)	Located at 11°33' E, 43°04' N, the heritage site covers an area of 61,187.9609 ha, with a buffer zone of 5,660.0771 ha. It is an area of combined historical, artistic, architectural and environmental characteristics, which showcases the

Matobo Hills	Zimbabwe	2003	(iii)(v)(vi)	agricultural beauty of the Renaissance and has been an essential destination for pilgrims to Rome since the Middle Ages. Located at 28°30' E, 20°30' S, it has a heritage area of 205,000 ha and a buffer zone of 105,000 ha. It is one of the richest rock formations and is a meeting place for rock art.
Viñales Valley	Cuba	1999	(iv)	Located at 183°43'0.12"W, 22°37'0.12"N, the core area is 13,200 ha. The valley landscape, exposed rocks, tobacco farming, farms and local architecture blend together.
Rio de Janeiro, Carioca Landscapes between the Mountain and the Sea	Brazil	2012	(v)(vi)	Located at 43°17'29" W, 22°56'52" S. The core area is 7,248.78 ha and the buffer area is 8,621.38 ha. It has a botanical garden, a famous statue of Christ, and a large number of designed landscapes.
Budj Bim Cultural Landscape	Australia	2019	(iii)(v)	Located at 141°53'7" E, 38°4'52" S, the core area covers 9,935 ha, including Bugibim Volcano, Lake Kanda, wetlands and swamps, one of the world's largest and oldest aquaculture networks.

Note: Relevant data refer to the UNESCO World Heritage Committee website at <http://whc.unesco.org/>.

### 3. OVERVIEW OF THE CULTURAL LANDSCAPE HERITAGE OF WUTAI MOUNTAIN

#### 3.1. Location

Mount Wutai is located in Xinzhou City, northeastern Shanxi Province, spanning Wutai County, Fanshi County, Dai County, Yuanping City, and Dingxiang County, between latitude 38°55'-39°66' N and longitude 113°29'-113°39' E<sup>[4]</sup>. It belongs to the northern end of the Taihang Mountain System, and is the highest mountain in the North China Plain, with the It is the highest peak in the North China Plain and is known as the "Roof of North China"

#### 3.2. Mount Wutai Cultural Landscape Heritage Value.

Mount Wutai is the first of the four most famous



Figure 2. Location of Mount Wutai

Buddhist mountains in China, a national geological park and a treasure house of ancient Chinese architecture and art. There are as many as 41 cultural landscapes in the area, and Buddhist culture is fully integrated with nature<sup>[5]</sup>, which has a rich cultural landscape heritage value.

**Table 2.** Table of cultural landscape heritage values of Mount Wutai

Value Categories	Overview of cultural landscape heritage values
Geological landforms	<p>Mount Wutai is geologically ancient, and is the highest mountain range composed of about 2.6 billion years old strata known in the world<sup>[2]</sup>. It has undergone many tectonic movements such as "Tiebao Movement", "Taihuai Movement", "Wutai Movement", "Yanshan Movement", etc<sup>[6]</sup>. Strata of different geological ages (especially Precambrian strata) have been exposed on a large scale, and the geological structure is complex, and the seven geological relics are complete<sup>[7]</sup>, such as the glacial landscape (Beitaiyi plane), the spring landscape (Taihuai Sanquansi spring), and the ancient animal landscape (Lingjian Cambrian Sanji worm), etc. It is a national geological park, and is known as the "Geological Museum of China".</p>
Biological Resources	<p>Mount Wutai is rich in biological resources. There are 100 families, 386 genus and 661 species of plants. The forest area of Wutai Mountain is 19,620 hectares, mainly composed of woody plants - trees and shrubs. There are 42 families, 71 genus and 160 species of woody plant resources. The grassland area is 256,267 hectares, with 501 species of herbaceous plants. There are 63 families, 149 genus and 205 species of terrestrial vertebrates; 16 orders, 36 families and 142 species of birds; 117 species of mountain insects.</p>
Mineral Resources	<p>Mount Wutai is rich in mineral resources, with over 30 kinds of non-metallic and metallic deposits, mainly sedimentary metamorphic (Anshan-type) iron ore deposits (Wutai iron ore), as well as copper ore (Taihuai) and gold ore (Wutai Zhenhai Temple).</p>
Buddhist Culture	<p>Mount Wutai is the only Buddhist monastery in China where green temples (Chinese Buddhist monasteries) and yellow temples (Tibetan Buddhist monasteries) coexist. The introduction of Buddhism to Mount Wutai began in the Eastern Han Dynasty, with the first peak of development in the Northern and Southern Dynasties, and the second peak of development and veneration of Manjushri Bodhisattva in the Tang Dynasty, and was revered by Buddhists from India and Japan.</p>
Architecture	<p>There are 86 complete religious sites, including 9 national key cultural relics and 9 temples on the World Heritage List, dating back to the Tang Dynasty and 7 dynasties thereafter<sup>[4]</sup>. The East Hall of the Buddhist Temple and the main hall of the Nanzen Temple are the only two remaining wooden structures of the Tang Dynasty in China, and the Ancestor Pagoda is one of the only remaining ancient pagodas of the Northern Wei Dynasty in China. Mount Wutai also preserves more than 150 pagodas of different building materials (brick pagodas, wooden pagodas, etc.), different building forms (loft pagodas, combined pagodas, etc.) and different nature (pagodas and tomb pagodas) since the Northern Wei Dynasty, which has an important influence on Buddhist architecture in China and the world.</p>
Intangible Cultural Heritage	<p>Mount Wutai Buddhist Music (one of the first national intangible cultural heritages in China), Zhonglu Bangzi, Fansi Yangge, Pujas (June Pujas, etc.), Mule and Horse Conferences, Stone Inkstone Carving Technique, Wen's Hollow Chengmu Inkstone Making Technique, Wutai Sai Opera, Buza Jumping, etc.</p>

Note: Relevant data refer to the website of Mount Wutai Scenic Spot Management Committee

<http://wts.sxxz.gov.cn/zjxfq/>.

## 4. ANALYSIS OF TOURISM DEVELOPMENT IN MOUNT WUTAI

### 4.1. Analysis of tourism situation in Mount Wutai.

Since Mount Wutai was listed as a World Cultural Landscape Heritage in 2009, the tourism reception of Mount Wutai has gradually increased and the tourism

revenue has been improving. However, compared with Lushan National Park, which is also listed as a World Cultural Landscape Heritage, there is a large gap between the tourism reception and income of Mount Wutai. In addition, according to the data of Mount Wutai Scenic Spot Management Committee, it can also be known that there is a clear tourism off-peak season in Mount Wutai<sup>[8]</sup>, which is known as a cool destination with relatively large number of tourists in summer.

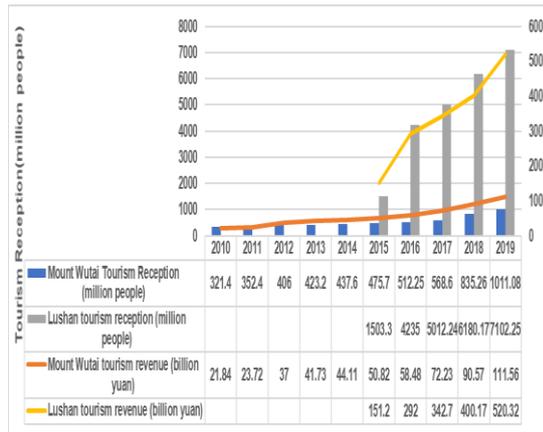


Figure 3. Comparison of tourism status between Mount Wutai and Lushan National Park

#### 4.2. Analysis of tourism image perception of Mount Wutai.

Ctrip is a famous travel website in China<sup>[9]</sup>. This paper selects 100 travelogues from Ctrip, extracts relevant keywords, and summarizes the number of travelogues containing keywords. The results obtained through statistical analysis show that although Mount Wutai is a cultural landscape heritage, the impression and understanding of tourists about Wutai Mountain are mostly focused on the famous Buddhist mountain and ancient architecture, but not on the natural resources of Mount Wutai, which indicates that the tourism image of Mount Wutai is not comprehensive enough and the tourism structure is single.

#### 4.3. Mount Wutai Visitor Satisfaction Analysis

Tourists are more satisfied with the attractions and food in Mount Wutai, while they are less satisfied with

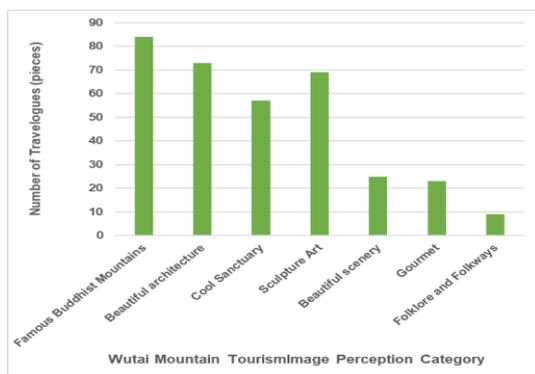


Figure 4. Tourism image perception of Mount Wutai

the transportation and accommodation. After the questionnaire survey, the problem of accommodation conditions in Mount Wutai is mainly reflected in the high cost of accommodation. Tourists' satisfaction with the transportation conditions of Mount Wutai is the lowest, mainly due to the low number of direct trips to Wutai Mountain from inside and outside Shanxi Province and the long distance from the core scenic area of Mount Wutai to the top of the five platforms. In addition, most of the tourists think that Mount Wutai has a single type of tourist souvenirs, most of which are related to Buddhism, while there are relatively few souvenirs of Mount Wutai specialty products.

Table 3: Analysis of tourist satisfaction in Mount Wutai

Survey Content	Satisfaction n (%)	General Satisfaction n (%)	Dissatisfied (%)
Tourist Attractions	77.8	20.6	1.6
Accommodation	45.3	39.8	14.9
Transportation	20.6	59.2	20.2
Food	56.5	39.3	4.2
Tourist Souvenirs	28.6	55.7	15.7

#### 4.4. Analysis of visitor unit price in Mount Wutai

From August 1st to August 20th is the peak period of domestic tourism in China, and the average spending on accommodation and transportation costs of Mount Wutai and Lushan National Park (Beijing, Shanghai, Guangzhou and Shenzhen as an example) are queried for the reference period. By comparing and analyzing, the total per capita spending in Mount Wutai is much larger than the total per capita spending in Lushan National Park. In terms of accommodation and transportation, the average spending in Mount Wutai is also larger than the average spending in Lushan. The overall unit price of visitors to Mount Wutai is greater than the unit price of visitors to Lushan. The increase in the unit price of tourists will reduce the attractiveness of tourists, and the rate of repeat visits will be reduced, and the tourism revenue of the site will be reduced accordingly.

**Table 4:** Analysis of visitor unit price in Mount Wutai

	Total spending per capita (tourism revenue/visitor arrivals) (2019)	Accommodation (Yuan)	Beijing - Destination (Yuan)	Shanghai - Destination (yuan)	Guangzhou - Destination (yuan)	Shenzhen - Destination (yuan)
Mount Wutai	1103.5	607.6	224.5	499.9	568.3	603.9
Lushan National Park	732.6	327.6	473.0	372.5	511.4	443.8

**5. MOUNT WUTAI CONSERVATION AND SUSTAINABLE DEVELOPMENT RECOMMENDATIONS**

**5.1. Improve traffic accessibility and tourism service facilities.**

There are 114 cultural landscape heritage sites in the world, 3 of which are listed as endangered, and the Elbe Valley in Germany was delisted in 2009 due to the destruction of the landscape by new construction in the core area, which shows that there is a long way to go to protect the cultural landscape heritage. The conservation status of ancient buildings in Mount Wutai is not optimistic. There were more than 200 temples in the Northern Qi Dynasty, more than 360 in the Tang Dynasty, 72 remaining in the Song Dynasty, 104 in the Ming Dynasty, 112 in the late Qing Dynasty, and only 86 relatively intact places of religious activities remain<sup>[4]</sup>. Mount Wutai should increase the protection of ancient buildings and reduce the construction of too many new buildings. Increase the publicity, education and legal protection of the cultural landscape heritage of Mount Wutai and raise people's awareness of the protection of world heritage.

**5.2. Improve traffic accessibility and tourism service facilities.**

The five tops of Mount Wutai are far away from the core area of Taihuai Town and are not easily accessible, resulting in many attractions that tourists cannot stroll around, in addition to fewer direct trips to Mount Wutai,

which to a certain extent affects the development of tourism in Mount Wutai. Mount Wutai should strengthen the accessibility of the transportation network within the attractions, increase the number of roads to key attractions (such as the Buddha Light Temple) and increase the number of sightseeing buses. At the same time, basic tourism service facilities such as tourist service centers, rest areas and public restrooms in Mount Wutai should be continuously improved to meet the needs of tourists. Many accommodations in the core scenic area of Taihuai Town are too close to the attractions<sup>[10]</sup>, which threatens the cultural landscape heritage of Mount Wutai, and the world heritage should be protected while improving tourism service facilities.

**5.3. Explore the tourism value of world cultural landscape heritage and improve heritage tourism structure.**

Tourists' perception of Mount Wutai is concentrated on the cultural aspects, and they do not have a deep understanding of the natural aspects, which to some extent causes the singularity of the source structure<sup>[11]</sup>. We should deeply explore the tourism value, combine the value of cultural landscape heritage, improve the structure of heritage tourism<sup>[12]</sup>, attract more tourists from the source, create the image of ecological tourism<sup>[13]</sup> and geological tourism in Mount Wutai, and promote the sustainable development of Mount Wutai. In addition, the construction of Mount Wutai tourism website should be strengthened to improve the tourism image of Mount Wutai and improve the tourism structure of the heritage site<sup>[14]</sup>.

#### ***5.4. Reasonable price adjustment to improve the attractiveness of tourism in Mount Wutai.***

Mount Wutai should regulate the higher phenomena of accommodation, transportation and entrance fees, provide certain consumption subsidies for tourists, improve the tourism attractiveness of Mount Wutai, promote the development of Mount Wutai tourism, and promote the protection and development of Mount Wutai with tourism.

#### ***5.5. Strengthen the links with other tourist places and promote regional tourism integration.***

Shanxi Province has a long history and rich tourism resources. Mount Wutai should strengthen the connection with other tourist places in the province to promote regional tourism integration, increase tourism income and promote the protection and development of Mount Wutai.

## **6. CONCLUSION**

World cultural landscape heritage represents "the common work of nature and mankind"<sup>[2]</sup>, with rich scientific, historical, cultural and tourist values, and is a major destination for tourism, and tourism in heritage sites is also a major tool for economic development. Mount Wutai is a cultural landscape heritage as well as a famous tourist destination in China. Through research and analysis, the current tourism situation of Mount Wutai is found to have obvious shortcomings, and in response to the existing problems, corresponding measures should be taken to protect and sustain the development of Wutai Mountain cultural landscape heritage driven by tourism<sup>[13]</sup>.

Mount Wutai is one of the earliest sites on earth to be exposed to water and has preserved a large number of geological relics<sup>[2]</sup>, and as a sacred Buddhist mountain, it has preserved a large number of Buddhist architecture and artworks from various periods. Although this paper proposes suggestions for the conservation and development of Mount Wutai, other heritage sites can also learn from the experience and suggestions to promote their own conservation and development.

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